EPA Reg. No. 70506-332

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

July 21, 2017

Ms. Sherry B. Hutcheson
Senior Regulatory Manager
United Phosphorus, Inc.
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406

Subject: Notification per PRN 98-10 – Adding Alternate Source of Active Ingredient
Product Name: Zylo Insecticide
EPA Registration Number: 70506-332
Application Date: June 26, 2017
Decision Number: 530782

Dear Ms. Hutcheson:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the actions requested fall within the scope of PRN 98-10. The CSFs submitted with your application have been stamped "Notification" and placed in our files.

Please note that the record for this product currently contains the following CSFs:

- Basic CSF dated October 3, 2016
- Alternate CSF 1 dated June 26, 2017

Any CSFs other than those listed above are superseded/no longer valid. If you have any questions, please contact Rebecca Whalen at 703-347-8228 or by email at whalen.rebecca@epa.gov.

Sincerely,

Michael Walsh
Product Manager 11
Invertebrate & Vertebrate Branch 2
Registration Division
Office of Pesticide Programs

Please read instructions on reverse before completing form.

Form Approved, OMB No. 2070-0060, Approval expires 05-31-98

EPA United States Environmental Protection Agency Washington, DC 20460

☐ **Registration** ☐ **Amendment** ☒ **Other:** NOTIF

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
70506-332	Michael Walsh	☐ None ☐ Restricted
4. Company/Product (Name)	PM#	
Zylo Insecticide	11	
5. Name and Address of Applicant *(Include ZIP Code)* **United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19406** ☐ *Check if this is a new address*	6. **Expedited Review.** In accordance with FIFRA Section 3(c)(3)(b)(I), my product is similar or identical in composition and labeling to: EPA Reg. No. Product Name	

Section - II

☐ Amendment – Explain below.
☐ Resubmission in response to Agency letter dated _____
☒ Notification - Explain below.
☐ Final printed labels in response to Agency letter dated _____
☐ "Me Too" Application
☐ Other - Explain below

Explanation: Use additional page(s) if necessary. (For Section I and Section II.)
Please see cover letter for explanation.

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
☐ Yes* ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Metal ☐ Plastic ☐ Glass ☐ Paper ☒ Other (Specify)
***Certification must be submitted**	If "Yes" Unit Packaging wgt. / No. per container	If "Yes" Package wgt. / No. per container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
☒ Label ☐ Container	**2.5 gallon jug**	☐ On Label ☒ On labeling accompanying product

6. Manner in Which Label is Affixed to Product ☐ Lithograph ☒ Paper glued ☐ Stenciled ☐ Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application)*

Name	Title	Telephone No. (Include Area Code)
Sherry B. Hutcheson	Sr. Regulatory Manager	229-247-9041

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received **(Stamped)**

2. Signature	3. Title	
Sherry B. Hutcheson	Sr. Regulatory Manager	
4. Typed Name	5. Date	
Sherry B. Hutcheson	06/26/2017	

EPA Form 8570-1 (Rev. 8-94) Previous editions are obsolete **White- EPA File Copy (original) Yellow- Applicant Copy**

United Phosphorus, Inc.
Sherry B. Hutcheson
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406
Phone: (229) 247-9041

June 26, 2017

Michael Walsh (PM 11)
Document Processing Desk (NOTIF)
Office of Pesticide Programs (7504P)
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave., N.W.
Washington, DC 20460

RE: Notification for alternate source of active ingredient for Zylo Insecticide (EPA Reg. No. 70506-332)

Dear Mr. Walsh,

Please find enclosed United Phosphorus Inc.'s Notification of alternate source of active ingredient for Zylo Insecticide under the guise of PR Notice 98-10.

In addition to this letter, the following enclosures and attachments are included with this notification:

- Application for Notification (EPA Form 8570-1)
- Alternate Confidential Statements of Formula (EPA Form 8570-4)
- Formulator's Exemption Statement (EPA Form 8570-27) – one for alternate source of active ingredient.

This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 USC Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

If you have any questions, please feel free to contact me at 229-247-9041 or sherry.hutcheson@uniphos.com

Thank you for your kind attention to this matter.

Best regards,

Sherry B. Hutcheson

Sherry B. Hutcheson
Sr. Regulatory Manager

Product ingredient source information may be entitled to confidential treatment

Form approved. OMB No. 2070-0060, 2070-0057, [redacted]-0107, 2070-0122, 2070-0164.

EPA

United States
Environmental Protection Agency
Washington, DC 20460

Formulator's Exemption Statement

(40 CFR 152.85)

Applicant's Name and Address	EPA File Symbol/Registration Number
United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19406	70506-332
	Product Name Zylo Insecticide
	Date of Confidential Statement of Formula *(EPA Form 8570-4)* 06/26/2017

As an authorized representative of the applicant for registration of the product identified above, I certify that:

(1) This product contains the following active ingredient(s):

Methoxyfenozide (121027)

(2) Of these, each active ingredient listed in paragraph (4) is present solely as the result of the use of that active ingredient in the manufacturing, formulation or repackaging another product which contains that active ingredient which is registered under FIFRA Section 3, is purchased by us from another person and meets the requirements of 40 CFR section 158.50(e)(2) or (3).

(3) Indicate by checking (A) or (B) below which paragraph applies:

☑ (A) An accurate Confidential Statement of Formula *(EPA FORM 8570-4)* for the above identified product is attached to this statement. That formula statement indicates, by company name, registration number, and product name, the source of the active ingredient(s) listed in paragraph (1).

OR

☐ (B) The Confidential Statement of Formula (CSF)(EPA Form 8570-4) referenced above and on file with the EPA is complete, current, an accurate and contains the information required on the current CSF.

(4) The following active ingredients in this product qualify for the formulator's exemption.

	Source	
Active Ingredient	Product Name	Registration Number
Methoxyfenozide	[redacted]	[redacted]

Signature	Name and Title	Date
Sherry B. Hutcheson	Sherry Hutcheson, Sr. Reg. Manage[redacted]	06/26/2017

EPA Form 8570-27 (Rev. 06-2004)

Copy 1 – EPA
Copy 2 - Applicant copy

JACKET

Walsh, Michael

From: Sherry Hutcheson <sherry.hutcheson@uniphos.com>
Sent: Tuesday, June 27, 2017 8:54 AM
To: Walsh, Michael
Subject: RE: 70506-332 Notification submission

Thanks Mike
Sherry

Sherry Hutcheson
Sr. Regulatory Manager
United Phosphorus, Inc.
Office: 229-247-9041
Mobile: 229-251-7134

From: Walsh, Michael [mailto:Walsh.Michael@epa.gov]
Sent: Tuesday, June 27, 2017 6:40 AM
To: Sherry Hutcheson <sherry.hutcheson@uniphos.com>
Subject: RE: 70506-332 Notification submission

Hi Sherry.

I received your submission this morning, and have provided it to the reviewed asking that processing be expedited.

Thanks.

Mike

From: Sherry Hutcheson [mailto:sherry.hutcheson@uniphos.com]
Sent: Monday, June 26, 2017 12:55 PM
To: Walsh, Michael <Walsh.Michael@epa.gov>
Subject: RE: 70506-332 Notification submission

Mike,
Please see the attached files requested for the resubmission of the notification for 70506-332.
Let me know if you have any questions.

Sherry Hutcheson
Sr. Regulatory Manager
United Phosphorus, Inc.
Office: 229-247-9041

From: Walsh, Michael [mailto:Walsh.Michael@epa.gov]
Sent: Friday, June 23, 2017 7:23 AM
To: Sherry Hutcheson <sherry.hutcheson@uniphos.com>
Subject: 70506-332 actions, and other matters.

Hi Sherry:

A few things:

ABN "TurnStyle Insecticide" Accepted - Attached please find the decision letter accepting the alternate brand name "TurnStyle Insecticide" for 70506-332. Please note that labels submitted only for alternate brand names are not stamped, which is why no stamped label accompanies this response.

CSF Notification for this Product - I am sorry that we have not been able to connect. I received your email and voice mail in response to my voice mail. For this product, I would like to get the CSF Notification completed. Since the CSF was previously denied, that submission is closed. Please submit a new CSF Notification proposing the same alternate source. There are a few options for submitting: 1) through regular means, 2) through the Portal, or 3) via email directly to me. Please note that the security of sensitive or confidential information sent to me via email cannot be guaranteed, so the Portal may be best. Please submit the exact same CSF again. The CSF itself, the cover letter, and the application form should be signed and must bear the current date. Please address the letter, etc. to me. Notifications are in-processed differently from most actions, so it would be helpful if you let me know after the submission is made, so I can retrieve the submission myself, and we can get this wrapped-up.

Adding Crops to New UPL/UPI Methoxyfenozide Technical Product Label - It is our preference that crops appearing on the end-use product labels also be clearly listed on the technical product labels used to formulate those end-use products. In this case, adding the absent crops to the label can be done by label amendment. The appropriate public non-compensable IR-4 MRIDs must be listed on the data matrix accompanying the action. I am out of the office on Monday. Would you have some time to very briefly discuss this matter on Tuesday or Wednesday? If so, please let me know when is best for you.

Thanks.

Mike

USE SITES ON THE PRODUCT LABEL FOR 70506-332 ARE SUPPORTED BY THE SOURCE PRODUCT.

-M. WALSH
7/21/2017

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

June 23, 2017

Ms. Sherry B. Hutcheson
Senior Regulatory Manager
United Phosphorus, Inc.
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406

Subject: Notification per PRN 98-10 – Adding Alternate Brand Name
Product Name: Zylo Insecticide
EPA Registration Number: 70506-332
Application Date: June 20, 2017
Decision Number: 530647

Dear Ms. Hutcheson:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The alternate brand name **TurnStyle Insecticide** has been added to the product record.

If you have any questions, you may contact Rebecca Whalen by phone at (703) 347-8228 or via email at whalen.rebecca@epa.gov.

Sincerely,

Michael Walsh
Product Manager 11
Invertebrate & Vertebrate Branch 2
Registration Division
Office of Pesticide Programs

GROUP 18 INSECTICIDE

Zylo™ INSECTICIDE

ABN: TurnStyle Insecticide

Active Ingredient:	
methoxyfenozide: Benzoic acid, 3-methoxy-2-methyl-,2-(3,5-dimethylbenzoyl)-2-(1,1-dimethylethyl) hydrazide	22.6%
Other Ingredients:	77.4%
Total:	100.0%

Contains 2 lbs methoxyfenozide active ingredient per gallon

Keep Out of Reach of Children

CAUTION

FIRST AID	
If on skin:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes • Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency medical assistance, call the Rocky Mountain Poison and Drug Center at 1-866-673-6671.
For chemical emergency: spill, leak, fire, exposure or accident, call CHEMTREC at 1-800-424-9300.

NET CONTENTS: _____ gal.

United Phosphorus, Inc.
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406
1-800-438-6071

EPA Reg. No. 70506-332
EPA Est. No. _____

Please read instructions on reverse before completing form.
expires 05-31-98

Form Approved, OMB No. 2070-0060, Approval

EPA United States **Environmental Protection Agency** Washington, DC 20460

☐ **Registration**
☐ **Amendment**
☒ **Other:** NOTIF

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
70506-332	Richard Gebken	☐ None ☐ Restricted
4. Company/Product (Name)	PM#	
Zylo Insecticide	10	

5. Name and Address of Applicant *(Include ZIP Code)*
United Phosphorus, Inc.
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406

☐ *Check if this is a new address*

6. **Expedited Review.** In accordance with FIFRA Section 3(c)(3)(b)(I), my product is similar or identical in composition and labeling to:
EPA Reg. No.

Product Name

Section - II

☐ Amendment – Explain below.
☐ Resubmission in response to Agency letter dated _____
☒ Notification - Explain below.
☐ Final printed labels in response to Agency letter dated _____
☐ "Me Too" Application
☐ Other - Explain below

Explanation: Use additional page(s) if necessary. (For Section I and Section II.)
Please see cover letter for explanation.

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
☐ Yes*	☐ Yes	☐ Yes	☐ Metal
☒ No	☒ No	☒ No	☐ Plastic
	If "Yes" Unit Packaging wgt. / No. per container	If "Yes" Package wgt. / No. per container	☐ Glass
***Certification must be submitted**			☐ Paper
			☒ Other (Specify)

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
☒ Label ☐ Container	**2.5 gallon jug**	☐ On Label ☒ On labeling accompanying product

6. Manner in Which Label is Affixed to Product
☐ Lithograph ☒ Paper glued ☐ Stenciled ☐ Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application)*

Name	Title	Telephone No. (Include Area Code)
Sherry B. Hutcheson	Sr. Regulatory Manager	229-247-9041

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received **(Stamped)**

2. Signature	3. Title
Sherry B. Hutcheson	Sr. Regulatory Manager
4. Typed Name	5. Date
Sherry B. Hutcheson	06/20/2017

EPA Form 8570-1 (Rev. 8-94) Previous editions are obsolete

White- EPA File Copy (original) Yellow- Applicant Copy

DOCUMENTUM

United Phosphorus, Inc.
Sherry B. Hutcheson
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406
Phone: (229) 247-9041

June 20, 2017

Richard Gebken (PM 10)
Document Processing Desk (NOTIF)
Office of Pesticide Programs (7504P)
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave., N.W.
Washington, DC 20460

RE: Notification for alternate brand name for Zylo Insecticide (EPA Reg. No. 70506-332)

Dear Mr. Gebken,

Please find enclosed United Phosphorus Inc.'s Notification of alternate brand name for Zylo Insecticide under the guise of PR Notice 98-10. The ABN is TurnStyle Insecticide.

In addition to this letter, the following enclosures and attachments are included with this notification:

- Application for Notification (EPA Form 8570-1)
- One copy of the label marked with the proposed alternate brand name.
- One copy of the label – clean – with the proposed alternate brand name

This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 USC Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

If you have any questions, please feel free to contact me at 229-247-9041 or sherry.hutcheson@uniphos.com

Thank you for your kind attention to this matter.

Best regards,

Sherry B. Hutcheson

Sherry B. Hutcheson
Sr. Regulatory Manager

Receipt for Section 3

S: 1005204 Milestone Email: sherry.hutcheson@uniphos.com

Regulatory Type: Product Registration - Section 3 Resubmission: Yes No

Application Type: Notification Fee For Service: Yes No

Company: 70506 UNITED PHOSPHORUS, INC V

Risk Manager: Registration Division, Risk Management Team 10

Product #: 70506-332 Product Name: Zylo Insecticide

Override#

Me Too Section3: 62719-442 Me Too Product Name: INTREPID 2F INSECTICIDE

Application Date: 20-Jun-2017 OPP Recvd Date: 20-Jun-2017

Front End Date: 21-Jun-2017 Risk Manager Send Date: 21-Jun-2017

FFS Due Date: Negotiated Due Date:

OPP Target Date:

Fast Track: New Ingredient:

Receipt Description:

Portal submission pkg. #20533. Notification to add an ABN per PRN 98-10.

New Ingredient Request Date:

New Ingredient Received Date:

Form A: Signature Date: Form B. Signature Date:

Print Letter

Enter More Information

Tracking

Receipt Content

Electronic Label

View/Edit

RECEIVED
JUN 23 2017

DOCUMENTUM

MEMORANDUM

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

June 14, 2017

Ms. Sherry B. Hutcheson
Senior Regulatory Manager
United Phosphorus, Inc.
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406

Subject: Notification per PRN 98-10 – Adding Alternate Confidential Statement of Formula #1
Product Name: Zylo Insecticide
EPA Registration Number: 70506-332
Application Date: May 30, 2017
Decision Number: 530151

Dear Ms. Hutcheson:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the request is not acceptable for the following reasons:

- The proposed new source for the active ingredient does not support all use sites on this end-use product label.

  Note: If you would like to use active ingredient sources that do not support the use sites on the product label then data compensation must be addressed.

No further processing of this application will occur. You may submit a new application addressing the deficiencies listed above for future consideration. Our records have been updated accordingly to note that this notification is unacceptable.

If you have any questions, you may contact Rebecca Whalen at 703-347-8228 or via email at whalen.rebecca@epa.gov.

Sincerely,

Michael Walsh
Product Manager 11
Invertebrate & Vertebrate Branch 2
Registration Division
Office of Pesticide Programs

Please read instructions on reverse before completing form.
expires 05-31-98

Form Approved, OMB No. 2070-0060, Approval

EPA

United States
Environmental Protection Agency
Washington, DC 20460

☐ **Registration**
☐ **Amendment**
☒ **Other:** NOTIF

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
70506-332	Richard Gebken	☐ None ☐ Restricted
4. Company/Product (Name)	PM#	
Zylo Insecticide	10	

5. Name and Address of Applicant *(Include ZIP Code)*
United Phosphorus, Inc.
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406

☐ *Check if this is a new address*

6. **Expedited Review.** In accordance with FIFRA Section 3(c)(3)(b)(I), my product is similar or identical in composition and labeling to:
EPA Reg. No.

Product Name

Section - II

☐ Amendment – Explain below.
☐ Resubmission in response to Agency letter dated _____
☒ Notification - Explain below.
☐ Final printed labels in response to Agency letter dated _____
☐ "Me Too" Application
☐ Other - Explain below

Explanation: Use additional page(s) if necessary. (For Section I and Section II.)
Please see cover letter for explanation.

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
☐ Yes*	☐ Yes	☐ Yes	☐ Metal
☒ No	☒ No	☒ No	☐ Plastic
	If "Yes" Unit Packaging wgt. / No. per container	If "Yes" Package wgt. / No. per container	☐ Glass
***Certification must be submitted**			☐ Paper
			☒ Other (Specify)

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
☒ Label ☐ Container	**2.5 gallon jug**	☐ On Label ☒ On labeling accompanying product

6. Manner in Which Label is Affixed to Product
☐ Lithograph ☒ Paper glued ☐ Stenciled ☐ Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application)*

Name	Title	Telephone No. (Include Area Code)
Sherry B. Hutcheson	Sr. Regulatory Manager	229-247-9041

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

2. Signature	3. Title	6. Date Application Received (Stamped)
Sherry B. Hutcheson	Sr. Regulatory Manager	
4. Typed Name	5. Date	
Sherry B. Hutcheson	05/30/2017	

EPA Form 8570-1 (Rev. 8-94) Previous editions are obsolete

White- EPA File Copy (original) Yellow- Applicant Copy

Product ingredient source information may be entitled to confidential treatment

Form approved. OMB No. 2070-0060, 2070-00[redacted], 2070-0107, 2070-0122, 2070-0164.

EPA

United States
Environmental Protection Agency
Washington, DC 20460

Formulator's Exemption Statement

(40 CFR 152.85)

Applicant's Name and Address	EPA File Symbol/Registration Number
United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19406	70506-332
	Product Name Zylo Insecticide
	Date of Confidential Statement of Formula *(EPA Form 8570-4)* 05/30/2017

As an authorized representative of the applicant for registration of the product identified above, I certify that:

(1) This product contains the following active ingredient(s):

Methoxyfenozide (121027)

(2) Of these, each active ingredient listed in paragraph (4) is present solely as the result of the use of that active ingredient in the manufacturing, formulation or repackaging another product which contains that active ingredient which is registered under FIFRA Section 3, is purchased by us from another person and meets the requirements of 40 CFR section 158.50(e)(2) or (3).

(3) Indicate by checking (A) or (B) below which paragraph applies:

☑ (A) An accurate Confidential Statement of Formula *(EPA FORM 8570-4)* for the above identified product is attached to this statement. That formula statement indicates, by company name, registration number, and product name, the source of the active ingredient(s) listed in paragraph (1).

OR

☐ (B) The Confidential Statement of Formula (CSF)(EPA Form 8570-4) referenced above and on file with the EPA is complete, current, an accurate and contains the information required on the current CSF.

(4) The following active ingredients in this product qualify for the formulator's exemption.

Source

Active Ingredient	Product Name	Registration Number
Methoxyfenozide	[redacted]	[redacted]

Signature	Name and Title	Date
Sherry B. Hutcheson	Sherry Hutcheson, Sr. Reg. Manager	05/30/2017

EPA Form 8570-27 (Rev. 06-2004)

Copy 1 – EPA
Copy 2 - Applicant copy

United Phosphorus, Inc.
Sherry B. Hutcheson
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406
Phone: (229) 247-9041

May 30, 2017

Richard Gebken (PM 10)
Document Processing Desk (NOTIF)
Office of Pesticide Programs (7504P)
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave., N.W.
Washington, DC 20460

RE: Notification for alternate source of active ingredient for Zylo Insecticide (EPA Reg. No. 70506-332)

Dear Mr. Gebken,

Please find enclosed United Phosphorus Inc.'s Notification of alternate source of active ingredient for Zylo Insecticide under the guise of PR Notice 98-10.

In addition to this letter, the following enclosures and attachments are included with this notification:

- Application for Notification (EPA Form 8570-1)
- Alternate Confidential Statements of Formula (EPA Form 8570-4)
- Formulator's Exemption Statement (EPA Form 8570-27) – one for alternate source of active ingredient.

This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 USC Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

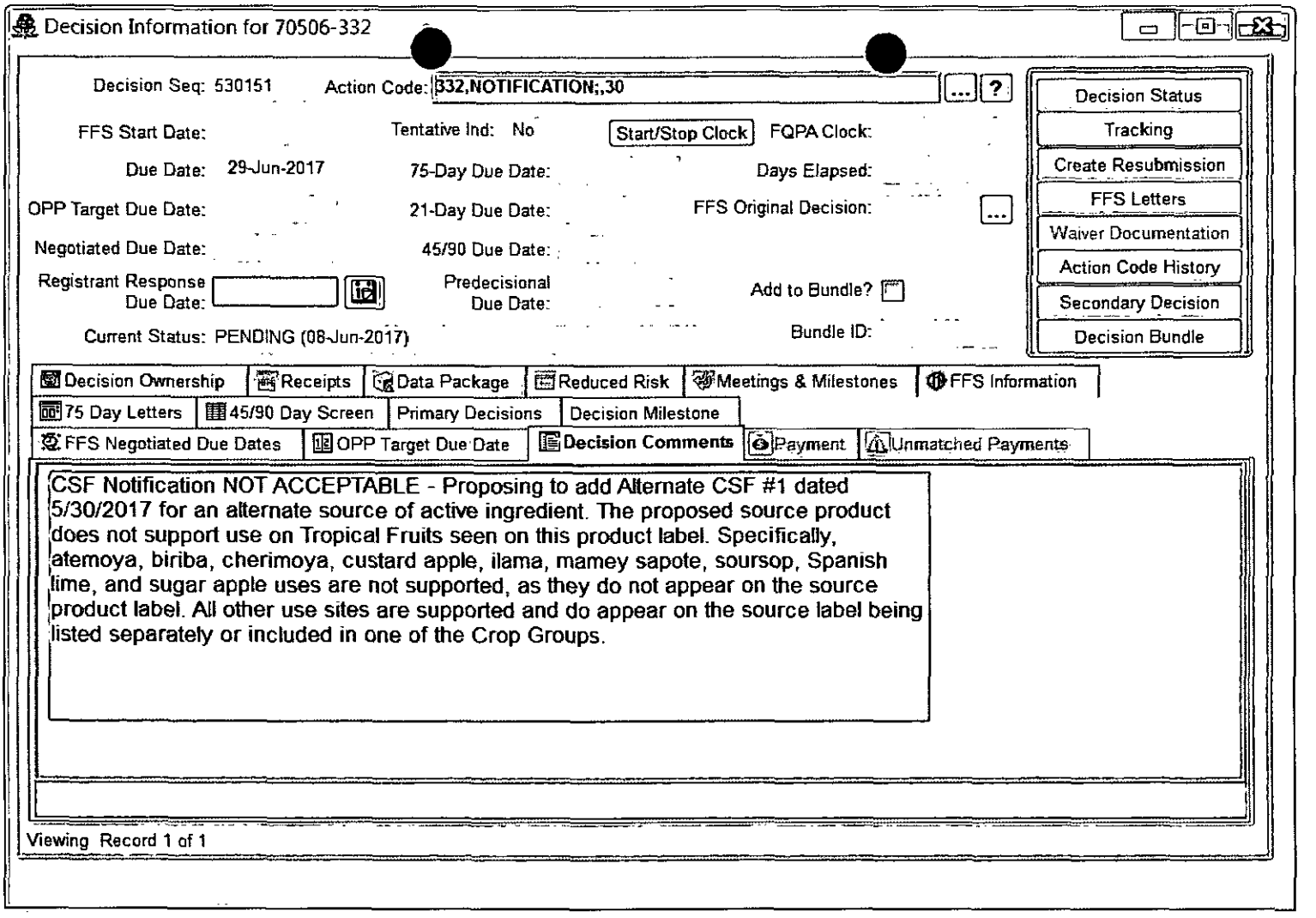
If you have any questions, please feel free to contact me at 229-247-9041 or sherry.hutcheson@uniphos.com

Thank you for your kind attention to this matter.

Best regards,

Sherry B. Hutcheson

Sherry B. Hutcheson
Sr. Regulatory Manager

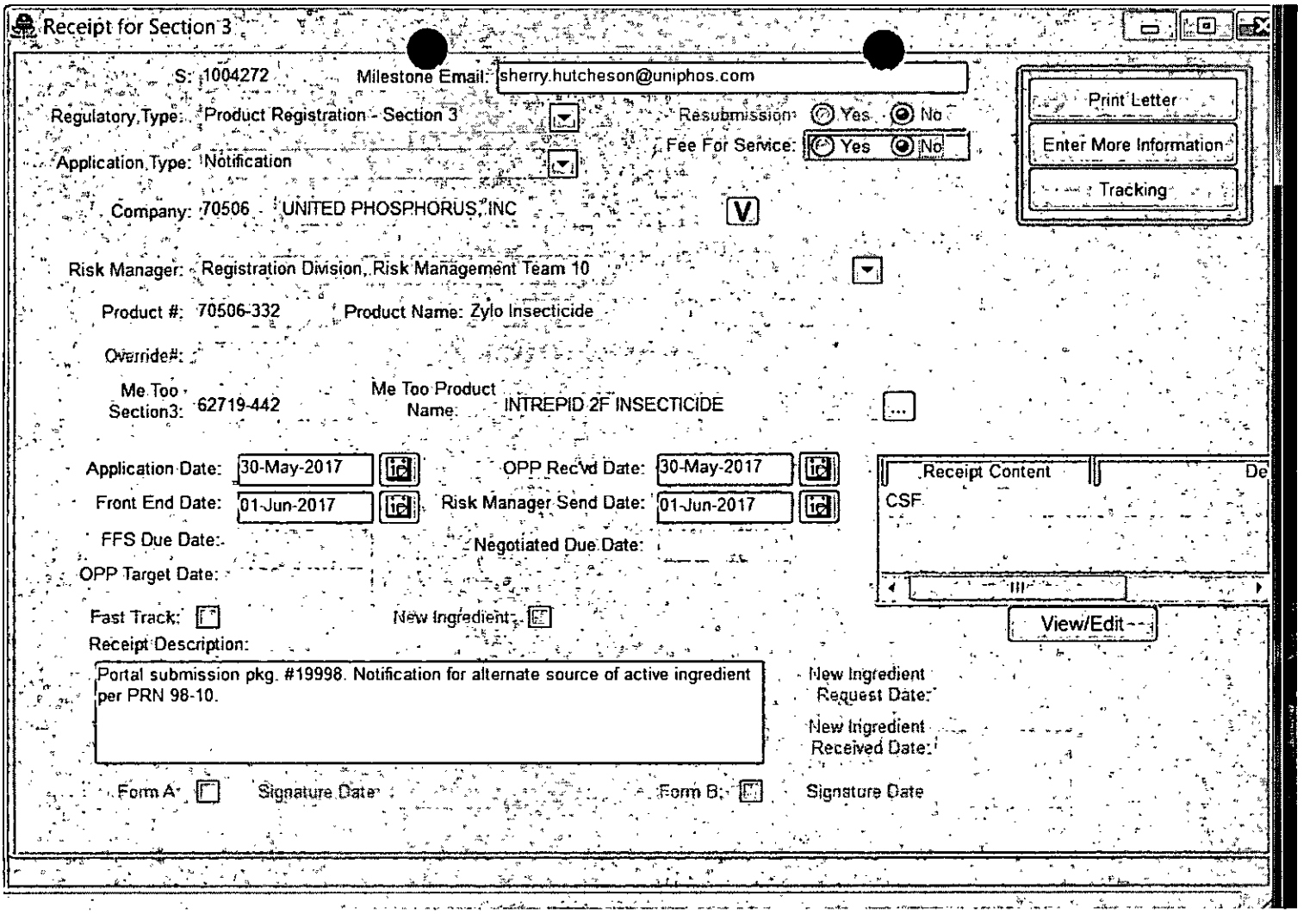


NOTE TO FILE:

Please see decision comments above

-R. Whalen 6-14-17

Dec. # 530151



Pkg'd Rec'd JUN - 8 2017

DOCUMENTUM

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

Note to File

Date: June 8, 2017

Registration Number: 70506-332

Decision Number: 530157

PM Name: Michael Walsh

Background:

- The submission of the Final Printed Label (FPL) was done electronically through the Portal.
- At this time, the Portal does not have a code to submit FPLs, so the submission was made as a Notification.

Decision:

- No response or follow-up is required for this submission.
- The action was closed in OPPIN by the Product Manager on 6/8/2017.

Please read instructions on reverse before completing form. Form Approved, OMB No. 2070-0060, Approval expires 05-31-98

EPA	United States Environmental Protection Agency Washington, DC 20460	☐ Registration ☐ Amendment ☒ Other: FPL	OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
70506-332	Richard Gebken	☐ None ☐ Restricted
4. Company/Product (Name)	PM#	
Zylo Insecticide	10	
5. Name and Address of Applicant *(Include ZIP Code)* **United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19406** ☐ *Check if this is a new address*	6. **Expedited Review**. In accordance with FIFRA Section 3(c)(3)(b)(I), my product is similar or identical in composition and labeling to: EPA Reg. No. Product Name	

Section - II

☐ Amendment – Explain below.
☐ Resubmission in response to Agency letter dated _____
☐ Notification - Explain below.
☒ Final printed labels in response to Agency letter dated **5/23/2017**
☐ "Me Too" Application
☐ Other - Explain below

Explanation: Use additional page(s) if necessary. (For Section I and Section II.)

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
☐ Yes* ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Metal ☐ Plastic ☐ Glass ☐ Paper ☒ Other (Specify)
***Certification must be submitted**	If "Yes" Unit Packaging wgt. / No. per container	If "Yes" Package wgt. / No. per container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
☒ Label ☐ Container	**2.5 gallon jug**	☐ On Label ☒ On labeling accompanying product

6. Manner in Which Label is Affixed to Product ☐ Lithograph ☒ Paper glued ☐ Stenciled ☐ Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application)*

Name	Title	Telephone No. (Include Area Code)
Sherry B. Hutcheson	Sr. Regulatory Manager	229-247-9041

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received **(Stamped)**

2. Signature	3. Title
Sherry B. Hutcheson	Sr. Regulatory Manager
4. Typed Name: Sherry B. Hutcheson	5. Date: 05/30/2017

EPA Form 8570-1 (Rev. 8-94) Previous editions are obsolete **White- EPA File Copy (original) Yellow- Applicant Copy**

United Phosphorus, Inc.
Sherry B. Hutcheson
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406
Phone: (229) 247-9041

May 30, 2017

Richard Gebken (PM 10)
Document Processing Desk (FPL)
Office of Pesticide Programs (7504P)
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave., N.W.
Washington, DC 20460

RE: Final Printed Label for Zylo Insecticide (EPA Reg. No. 70506-332)

Dear Mr. Gebken,

Please find enclosed United Phosphorus Inc.'s final printed label, Zylo Insecticide per EPA's letter of registration dated May 23, 2017.

In addition to this letter, the following enclosures are included

- Application for Notification (EPA Form 8570-1)
- Specimen label indicating the Final printed labeling for Zylo

If you have any questions, please feel free to contact me at 229-247-9041 or sherry.hutcheson@uniphos.com

Thank you for your kind attention to this matter.

Best regards,

Sherry B. Hutcheson

Sherry B. Hutcheson
Sr. Regulatory Manager

GROUP 18 INSECTICIDE

ZYLO™

INSECTICIDE

ACTIVE INGREDIENT:

methoxyfenozide: Benzoic acid, 3-methoxy-2-methyl-,2-(3,5-dimethylbenzoyl)-2-(1,1-dimethylethyl) hydrazide	22.6%
OTHER INGREDIENTS:	77.4%
TOTAL:	100.0%

Contains 2 lbs methoxyfenozide active ingredient per gallon

EPA Reg. No. 70506-332

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID	
If on skin	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency medical assistance, call the Rocky Mountain Poison and Drug Center at 1-866-673-6671.	

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure or accident, call CHEMTREC at 1-800-424-9300.

INSECTICIDE

NET CONTENTS: _____ GALLONS

UPI

United Phosphorus, Inc. • 630 Freedom Business Center, Suite 402 • King of Prussia, PA 19406 U.S.A. • 1-800-438-6071

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls

When handlers use closed systems, enclosed cabs or aircraft in a manner that meet the requirements listed in the Worker Protection Standards (WPS) for agricultural pesticides [40 CFR 170.240(d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change clothing.

ENVIRONMENTAL HAZARDS

Drift and runoff from applications of this product may be hazardous to sensitive aquatic invertebrates in water bodies adjacent to the treatment area. For terrestrial uses, do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Methoxyfenozide can contaminate surface water through spray drift. Under some conditions, methoxyfenozide may also have a high potential for runoff into surface water (primarily via dissolution in runoff water) for several months post-application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlaying extremely shallow groundwater, areas with in-field canals or ditches that drain to overlaying tile drainage systems that drain to surface water.

Do not cultivate within 10 feet of aquatic areas to allow growth of a vegetative filter strip.

Do not apply by ground within 25 feet, or by air within 150 feet, of lakes, reservoirs, rivers, permanent streams, marshes, or natural ponds; estuaries and commercial fish farm ponds.

Physical and Chemical Hazards

Do not mix or allow coming in contact with oxidizing agents. Hazardous chemical reaction may occur.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Not for Sale, Use, or Distribution in Nassau County and Suffolk County in New York State.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, is:

- Coveralls
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides *(40 CFR Part 170). The WPS applies when this product is used to produce* agricultural plants on farms, forests, nurseries or greenhouses.

Keep unprotected persons out of treated area until sprays have dried.

PRODUCT INFORMATION

Zylo™ Insecticide has a unique mode of action that mimics the action of the molting hormone of lepidopterous larvae. Upon ingestion, larval stages of the order lepidoptera undergo an incomplete and developmentally lethal premature molt. This process interrupts and rapidly halts their feeding. Feeding typically ceases within hours of ingestion, although complete mortality of the larvae may take several days. Affected larvae often become lethargic and often develop discolored areas or bands between segments.

Because Zylo Insecticide is narrow spectrum insecticide that specifically targets Lepidoptera, it is a good tool for Integrated Pest Management (IPM) programs. The selectivity of Zylo Insecticide allows beneficial insects and other arthropods to function unimpeded in the management of secondary pests while Zylo Insecticide provides control of troublesome lepidoptera pests. Zylo Insecticide belongs to the diacylhydrazine class of insecticides.

Use Rate Determination

Please carefully read and follow all label use rates and restrictions. Always ensure aerial or ground equipment is properly calibrated before use. Prepare only the amount of spray solution required to treat the application acreage.

Use the lower rates for light infestations of the target lepidopterous species and the higher rates for moderate to heavy infestations. Zylo Insecticide may be applied in either dilute or concentrate sprays so long as the application equipment is calibrated and adjusted to deliver thorough, uniform coverage. Use the specified amount of Zylo Insecticide per acre regardless of the spray volume used.

Mixing Directions

Always shake well before use. Avoid freezing.

Application Rate Reference Table

Application Rate of Zylo Insecticide (fl oz/acre)	Active Ingredient Equivalent (lb ai/acre)	Acres per Gallon of Zylo Insecticide
4 fl oz/A	0.06 lb ai/A	32 acres per gallon
6 fl oz/A	0.09 lb ai/A	21 acres per gallon
8 fl oz/A	0.12 lb ai/A	16 acres per gallon
10 fl oz/A	0.16 lb ai/A	13 acres per gallon
12 fl oz/A	0.19 lb ai/A	11 acres per gallon
16 fl oz/A	0.25 lb ai/A	8 acres per gallon
24 fl oz/A	0.38 lb ai/A	5 acres per gallon

Zylo Insecticide – When Used Alone

Mixing order when used alone.

- fill the spray tank 1/3 (one-third) to 1/2 (one-half) full of clean water;
- slowly pour Zylo Insecticide into the spray tank;
- maintain agitation in the spray tank during mixing, loading and application;
- triple rinse empty container, and add rinsate to the spray tank.

Zylo Insecticide – When Used In A Tank Mix

Zylo Insecticide is believed to be compatible with most commonly used agricultural insecticides, fungicides, growth regulators, foliar fertilizers and spray adjuvants. However, always conduct a compatibility test whenever preparing a new tank mix by mixing proportional amounts of all spray ingredients in a test jar. Shake the mixture vigorously and allow it to stand for 15 minutes. *Rapid precipitation of the ingredients and failure to re-suspend when shaken* indicates that the mixture is incompatible and should not be applied.

Mixing Order for Tank Mixes:

- fill the spray tank with water to 1/4 (one-fourth) to 1/3 (one-third) of the required spray volume.
- start agitation.
- add different formulation types in the order indicated below, allowing time for complete dispersion and mixing after addition of each product. Allow extra dispersion and mixing time for dry flowable products.

  Add different formulation types in the following order:

  1. Water dispersible granules
  2. Wettable powders
  3. Zylo Insecticide and other aqueous suspensions
- Maintain agitation and fill spray tank to 3/4 (three-fourths) of total spray volume. Then add:

  4. Emulsifiable concentrates and water-based solutions
  5. Spray adjuvants
  6. Foliar fertilizers
- finish filling the spray tank.
- maintain continuous agitation during mixing, final filling and throughout application. If spraying and agitation must be stopped before the spray tank is empty, the materials may settle to the bottom. Settled materials must be re-suspended before spraying is resumed.

When tank mixing with other products, observe all precautions, use restrictions, and other limitations on the labels for all products involved.

Application Timing

Zylo Insecticide activity is expressed primarily through ingestion by the target larvae. Therefore, the timing of application is dependent upon the feeding behavior of the target pest. For cryptic (internal) feeding larvae, application must be made prior to the time that surface feeding occurs, i.e., just prior to initiation of egg hatch. For foliar or surface feeding larvae, application may be made while active feeding is occurring.

Re-application may be required to protect rapidly expanding fruit, new flushes of foliage, or for extended infestations. The re-application interval will vary depending upon how rapidly the crop is growing, the generation time of the target pest and the duration of the infestation.

Zylo Insecticide is effective against all larval instars; however, it is best practice to make applications to early instars to minimize feeding damage. For best results, begin applications when threshold levels of moths, eggs or larvae occur. Consult the Cooperative Extension Service, or other qualified professional authorities, to determine the appropriate threshold and timing for application in your area.

Application Directions

Applications must be in a manner that assures uniform and thorough coverage as Zylo Insecticide must be ingested by insect larvae to be fully effective. Higher water volume and increased spray pressure generally provide better coverage.

Spray Drift Management

Adhere to the following buffer zones when applying this product near aquatic habitats (such as lakes, reservoirs, rivers, permanent streams, marshes, or natural ponds; estuaries and commercial fish farm ponds):

Application Method	Buffer Zone (feet)
ground boom	25
overhead chemigation	25
airblast	25
aerial	150

Wind: Only apply this product if the wind direction favors on-target deposition. Do not apply when the wind speed exceeds 10 mph.

Temperature Inversions: Do not make ground or aerial applications during a temperature inversion. Temperature inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

Droplet Size: Use only medium or coarser spray nozzles (for ground and non-ULV aerial application) according to ASABE (S572.1) definition for standard nozzles. In conditions of low humidity and high temperatures, use a coarser droplet size except where indicated for specific crops.

Ground Application

To avoid drift and achieve maximum performance of this product, make ground applications when the wind speed favors on-target product depositions (3 to 10 mph). Wind speed must be measured adjacent to the application site on the upwind side immediately prior to application. Do not apply when wind speed exceeds 10 mph. For groundboom applications, apply using a nozzle height of no more than 4 feet above the ground or crop canopy. Shut off the sprayer when turning at row ends. Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind directions are toward the aquatic area.

Airblast Sprayer: When using an airblast sprayer, coverage is also improved by operation of the sprayer at ground speeds that assure that the air volume within the tree canopy is completely replaced by the output from the airblast sprayer. Making applications in an alternate row middle pattern may result in less than satisfactory coverage and poor performance in conditions of high pest infestation levels, extremely large trees and/or dense foliage. For airblast applications, turn off outward pointing nozzles at row ends and when spraying the outer two rows. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy.

Chemigation Application

Zylo Insecticide may be applied to cranberries and ornamentals through sprinkler irrigation equipment. Do not apply this product by chemigation unless specified in crop-specific directions in this label or supplemental labeling.

General Directions for Chemigation: Apply through a properly calibrated chemigation system that has the appropriate back flow prevention devices. See the **Mixing Directions** section of the product label for specific mixing and dilution instructions. Apply Zylo Insecticide in dedicated chemigation cycles only, not as a part of a regular irrigation cycle. Do not exceed 900 gallons of water per acre application volume using just enough water to thoroughly wet the plants but not the soil. Use minimum volume for flushout to avoid diluting or rinsing off product. Washout time should not exceed six (6) minutes. Set sprinkler heads in a spacing not exceeding 50 feet by 60 feet and adjusted to provide 100% overlap.

Apply Zylo Insecticide only through solid-set sprinkler systems designed specifically for chemigation. Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label prescribed safety devices for public water systems are in place. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

- Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
- Chemigation systems connected to public water systems must contain a functional reduced-pressure zone (RPZ), back flow preventer or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must contain a functional, normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems not connected to a public water supply must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located in the irrigation pipeline to prevent water source contamination from back flow.
- Systems must use a positive displacement, metering injection pump (e.g., diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Do not apply when wind speed favors drift beyond the area intended for treatment.
- If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Aerial Application

Mount the spray boom on the aircraft so as to minimize drift caused by wing tip or rotor vortices. Use the minimum practical boom length and do not exceed 75% of the wing span or 80% of the rotor diameter. Flight speed and nozzle orientation must be considered in determining droplet size. Spray must be released at the lowest height consistent with pest control and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety. When applications are made with a crosswind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.

Rainfastness

As soon as dry. However, efficacy or residual will be reduced with exposure to rainfall or overhead irrigation.

Spray Adjuvants

The addition of agricultural adjuvants to sprays of Zylo Insecticide may improve initial spray deposits, redistribution and weatherability. Select adjuvants that are recommended and registered for your specific use pattern and follow their use directions. For best performance when using an adjuvant, use an adjuvant certified by the Chemical Producers and Distributors Association. Always add adjuvants last in the mixing process.

Insecticide Resistance Management

Zylo Insecticide is a Group 18 insecticide. Insect/mite biotypes with acquired resistance to Group 18 may eventually dominate the insect/mite population if Group 18 insecticides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of this product or other Group 18 insecticides.

To delay development of insecticide resistance, the following practices are recommended:

- Avoid consecutive use of insecticides on succeeding generations with the same mode of action (same insecticide group) on the same insect species.
- Consider tank mixtures or premix products containing insecticides with different modes of action (different insecticide groups) provided the products are registered for the intended use.
- Plan a comprehensive IPM program.
- Monitor treated insect populations in the field for loss of effectiveness.
- Do not treat seedling plants grown for transplant in greenhouses, shade houses, or field plots.
- Contact your local extension specialist, certified crop advisor, and/or manufacturer for insecticide resistance management and/or IPM recommendations for the specific site and resistant pest problems.

Endangered Species

The following applies to use of this product in Michigan (Allegan, Monroe, Montcalm, Muskegon, Newaygo, or Oceana counties) or Wisconsin (Adams, Burnett, Chippewa, Clark, Door, Eau Claire, Green Lake, Jackson, Juneau, Marquette, Monroe, Polk, Portage, Waupaca, Waushara, or Wood counties). This product may have effects on endangered species. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the county in which you are applying the product. To obtain Bulletins, no more than six months before using this product, consult http://www.epa.gov/espp/ or call 1-844-447-3813. You must use the Bulletin valid for the month in which you will apply the product.

Rotational Crop Restrictions

Following the final application of Zylo Insecticide at labeled rates for registered crop uses, the following rotational crops may be planted at intervals defined below.

Crop	Re-planting Interval
Registered crop uses	no restrictions
All other crops grown for food or feed	7 days

Note: Always refer to rotational restrictions and precautions of the most restrictive rotational guidelines when Zylo Insecticide is used in a tank mix.

USE INSTRUCTIONS

Bushberries (Subgroup 13-07B)[1], Aronia Berry, Buffalo Currant, Chilean Guava, European Barberry, Highbush Cranberry, Honeysuckle, Jostaberry, Juneberry, Lingonberry, Native Currant, Salal, Sea Buckthorn, and Cultivars and/or Hybrids of Each

(Not registered for use in New York)

[1]Bushberries (subgroup 13-07B) including black currant, elderberry, gooseberry, highbush blueberry, huckleberry, lowbush blueberry, red currant.

Ground Application: Apply in a minimum of 30 gallons per acre (gpa) by conventional ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
cherry fruitworm cranberry fruitworm	10-16 fl oz/A (0.16-0.25 lb ai/A)	Apply at initiation of egg laying [approximately 400 Day Degrees (DD) base 50°F] following biofix[1]. Make a second application at 100% petal fall (usually 7 to 14 days following the first application). An additional application (third) no sooner than 7 days following the second application may be required under high pressure or sustained moth flight.	• Do not apply more than 16 fl oz per acre per application or more than a total of 48 fl oz (0.75 lb ai) per acre per year. • Do not make more than 3 applications per year. • **Minimum Re-treatment Interval:** 7 days • **PHI:** 7 days • See **Rotational Crop Restrictions**
European grapevine moth light brown apple moth obliquebanded leafroller		**Spring (overwintering) generation:** Make one or two applications at bloom to petal fall to small larvae when threshold levels occur. **Summer generation:** Begin applications at peak moth flight (200 to 300 DD base 43°F) following biofix. An additional application (third) no sooner than 7 days following the second application may be required under high pressure or sustained moth flight.	
redbanded leafroller variegated leafroller		For control of other leafrollers, apply at early egg hatch for each generation. Make the first application before webbing and sheltering begins. Make a second application to ensure complete coverage of rapidly expanding fruits or foliage.	
spanworm		Apply when first signs of feeding damage appear or when infestations reach threshold levels as defined by cooperative extension service or other qualified professional authorities.	
green fruitworm		Apply when larvae are first detected in the clusters or when infestations reach threshold levels as defined by cooperative extension service or other qualified professional authorities.	
armyworm cutworm	8-16 fl oz/A (0.12-0.25 lb ai/A)	Apply when first signs of feeding damage appear or when infestations reach threshold levels as defined by cooperative extension service or other qualified professional authorities.	
gypsy moth	4-8 fl oz/A (0.06-0.12 lb ai/A)	Apply to early instars (1st, 2nd, or 3rd) at first signs of infestation.	

[1]Biofix is defined as first sustained adult catch in pheromone traps, typically five moths in three traps within a 7 day period. Consult state extension specialists or other qualified authorities for specific information regarding number, placement and management of pheromone traps.

Caneberries (Subgroup 13-07A)[1]

(Not registered for use in New York)

[1] Caneberries (subgroup 13-07A) including bababerry, bingleberry, blackberry, blackcap, black raspberry, black satin berry, boysenberry, caneberry, Cherokee blackberry, chesterberry, Cheyenne blackberry, coryberry, darrowberry, dewberry, dirksen thornless berry, framboise, frambueso, Himalayaberry, himbeere, hullberry, keriberry, lavacaberry, loganberry, lowberry, lucretiaberry, mammoth blackberry, marionberry, mayberry, nectarberry, olallieberry, Oregon evergreen berry, phenomenalberry, rangerberry, ravenberry, red raspberry, rossberry, Shawnee blackberry, thimbleberry, tulaeen, yellow raspberry, youngberry, cultivars, varieties, and/or hybrids of these.

Ground Application: Apply in a minimum of 30 gallons per acre by conventional ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gallons per acre. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
cherry fruitworm cranberry fruitworm	10-16 fl oz/A (0.16-0.25 lb ai/A)	Apply at initiation of egg laying [approximately 400 Day Degrees (DD) base 50°F] following biofix[1]. Make a second application at 100% petal fall (usually 7 to 14 days following the first application). An additional application (third) no sooner than 7 days following the second application may be required under high pressure or sustained moth flight.	• Do not apply more than 16 fl oz per acre per application or more than a total of 48 fl oz (0.75 lb ai) per acre per year. • Do not make. more than 3 applications per year. • **Minimum Re-treatment Interval:** 7 days • **PHI:** 3 days • See **Rotational Crop Restrictions**
light brown apple moth obliquebanded leafroller		**Spring (overwintering) generation:** Make one or two applications at bloom to petal fall to small larvae when threshold levels occur. **Summer generation:** Begin applications at peak moth flight (200 to 300 DD base 43°F) following biofix. An additional application (third) no sooner than 7 days following the second application may be required under high pressure or sustained moth flight.	
redbanded leafroller variegated leafroller		For control of other leafrollers, apply at early egg hatch for each generation. Make the first application before webbing and sheltering begins. Make a second application to ensure complete coverage of rapidly expanding fruits or foliage.	
spanworm		Apply when first signs of feeding damage appear or when infestations reach threshold levels as defined by cooperative extension service or other qualified professional authorities.	
green fruitworm		Apply when larvae are first detected in the clusters or when infestations reach threshold levels as defined by cooperative extension service or other qualified professional authorities.	
armyworm cutworm	8-16 fl oz/A (0.12-0.25 lb ai/A)	Apply when first signs of feeding damage appear or when infestations reach threshold levels as defined by cooperative extension service or other qualified professional authorities.	
gypsy moth	4-8 fl oz/A (0.06-0.12 lb ai/A)	Apply to early instars (1st, 2nd, or 3rd) at first signs of infestation.	

[1] Biofix is defined as first sustained adult catch in pheromone traps, typically five moths in three traps within a 7 day period. Consult state extension specialists or other qualified authorities for specific information regarding number, placement and management of pheromone traps.

Cilantro Leaves, Brassica (Cole) Leafy Vegetables (Crop Group 5)[1], Leafy Vegetables (Crop Group 4)[2], Leaves of Root and Tuber Vegetables (Crop Group 2)[3], and Turnip Greens

(Not registered for use in New York)

[1] Brassica (cole) leafy vegetables (crop group 5) including broccoli, broccoli raab, Brussels sprouts, cabbage, cauliflower, cavolo broccoli, Chinese broccoli, Chinese cabbage (bok choy, napa), Chinese mustard cabbage (gai choy), collards, kale, kohlrabi, mizuna, mustard greens, mustard spinach, rape greens.

[2] Leafy vegetables (except Brassica) (crop group 4) including amaranth, arugula, cardoon, celery, celtuce, chervil, Chinese celery, corn salad, dandelion, dock, edible-leaved chrysanthemum, endive (escarole), florence fennel, garden cress, garden purslane, garland chrysanthemum, lettuce (head, leaf), New Zealand spinach, orach, parsley, radicchio, rhubarb, spinach, Swiss chard, upland cress, vine spinach, winter purslane.

[3] Leaves of root and tuber vegetables (crop group 2) including bitter cassava, black salsify, carrot, celeriac, chicory, dasheen, edible burdock, garden beet, parsnip, oriental radish, radish, rutabaga, sugarbeet, sweet cassava, sweet potato, tanier, true yam, turnip, and turnip-rooted chervil.

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
beet armyworm cabbage looper cutworms (suppression only) fall armyworm garden webworm imported cabbageworm southern armyworm true armyworm yellowstriped armyworm	4-8 fl oz/A (0.06-0.12 lb ai/A)	For early season applications only to young crops and small plants. Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.	• Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 1 day • See **Rotational Crop Restrictions**
beet armyworm cabbage looper cabbage webworm cross-striped cabbageworm cutworms (suppression only) fall armyworm garden webworm imported cabbageworm southern armyworm true armyworm yellowstriped armyworm	8-10 fl oz/A (0.12-0.16 lb ai/A)	For mid- to late-season applications, heavier infestations, and under conditions in which thorough coverage is more difficult. For heavy infestations, continuous moth flights, and/or egg masses and larvae in all stages of development, a 10 to 14 day re-treatment interval is required to protect new growth until moth flights and/or hits subside.	
diamondback moth (suppression only)	12-16 fl oz/A (0.19-0.25 lb ai/A)	Infestations and crop damage are reduced when applied at initiation of egg laying.	

Citrus Fruits (Crop Group 10-10)[1]

(Not registered for use in New York)

[1]Citrus fruits (crop group 10-10) including Australian desert lime, Australian finger lime, Australian round lime, brown river finger lime, calamondin, citron, citrus hybrids, grapefruit, Japanese summer grapefruit, kumquat, lemon, lime, Mediterranean mandarin, mount white lime, New Guinea wild lime, pummelo, russell river lime, satsuma mandarin, sour orange, sweet lime, sweet orange, tachibana orange, Tahiti lime, tangelo, tangerine (Mandarin), tangor, trifoliate orange, uniq fruit, cultivars, varieties and/or hybrids of these.

Ground Application: Apply a minimum of 50 gallons per acre by conventional ground equipment to trellised trees or trees 10 feet tall or less. For trees more than 10 feet tall, use a minimum of 100 gallons per acre. For low volume applications, apply a minimum of 20 gallons per acre by ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Optimum results are achieved when higher spray volumes are used. Calibrate equipment to the desired spray volume. When using a new application method or product for the first time, treat a small area before applying to larger areas.

Resistance Management: To reduce the potential for resistance development in target pest species, do not make more than 3 consecutive applications of Zylo Insecticide. If additional treatments are required after two consecutive applications, rotate to another class of effective insecticide of alternate modes of action for at least two applications and utilize Integrated Pest Management practices such as routine monitoring, treatment thresholds to time applications, and cultural and biological controls whenever possible. Consult your extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
citrus leafminer citrus peelminer cutworms leafrollers orange dog worm	8-16 fl oz/A (0.12-0.25 lb ai/A)	Apply at the first observation of the pests on the flushing leaves. Reapply no sooner than 14 day intervals.	• Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 1 day

Corn (Field, Sweet, and Seed)[1]

(Not registered for use in New York)

Specific Use Directions-Field Corn:

Ground Application: Apply in a minimum of 5 gpa by conventional ground equipment to young crop or small plants. Higher carrier volumes may be required to provide thorough coverage to larger, more mature crop. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 5 gpa. Use sufficient carrier volume to provide thorough, uniform coverage.

Specific Use Directions-Sweet Corn:

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa after initiation of tasseling. Calibrate equipment and spray volume to assure uniform coverage of infested parts of the crop.

Aerial Application: Apply in a minimum of 10 gpa.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
European corn borer southwestern corn borer sugarcane borer	4-16 fl oz/A (0.06-0.25 lb ai/A)	Apply at first sign of egg hatch or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities. Direct application at the whorl for early season (first generation) infestations. Apply as broadcast or multinozzle over the row application to mid- and late-season infestations.	• Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI-Field Corn:** 21 days • **PHI-Sweet Corn:** 3 days of harvest for ears and/or green chop (forage); and 21 days of harvest for dry fodder. • See **Rotational Crop Restrictions**
true armyworm western bean cutworm	4-16 fl oz/A (0.06-0.25 lb ai/A)	Apply at first sign of egg hatch (field corn), feeding damage (sweet corn), or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities. Under heavy infestations, continuous moth flights, or rapid crop growth and development, reapply at 5 to 10 day re-treatment intervals.	

Cotton

(Not registered for use in New York)

Ground Application: Make applications by conventional ground sprayers which are calibrated to deliver a minimum of 5 gpa.

Aerial Application: Apply in a minimum of 3 gpa. Use a higher carrier volume or heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
beet armyworm cabbage looper cotton leaf perforator cotton leafworm fall armyworm[1] saltmarsh caterpillar southern armyworm soybean looper true armyworm yellowstriped armyworm	4-10 fl oz/A (0.06-0.16 lb ai/A)	Apply at egg hatch or when first signs of feeding occur. Use a higher rate for heavier infestations and under conditions in which thorough coverage is more difficult (most fall armyworm). Under heavy infestations, continuous moth flights and/or egg masses and larvae in all stages of development, a 10 to 14 day re-treatment interval is required to protect new growth until moth flights and/or hits subside.	• Do not apply more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 14 days

[1]Suppression only. Use a higher rate in the rate range and ensure thorough coverage. Tank mixing Zyto Insecticide with other products registered for fall armyworm control in cotton (e.g., pyrethroids, or others) has been shown to improve control. Consult your extension service specialist, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Cranberry

(Not registered for use in New York)

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa.

Chemigation Application: Zyto Insecticide may be applied through sprinkler irrigation systems to control listed pests. Use specified broadcast application rates. See **Chemigation Application** section.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
blackheaded fireworm gypsy moth spanworms *sparganothis* fruitworm spotted fireworm	10-16 fl oz/A (0.16-0.25 lb ai/A)	**Spring (overwintering) generation:** Make 1 to 2 applications during the flower bud development period depending upon infestation level. **Summer generation:** Make the first application during the period of peak egg lay to early egg hatch. Reapply 10 to 18 days later. A higher rate in the rate range and additional applications at 10 to 18 day intervals may be required for heavy infestations, sustained moth flight, situations in which it is difficult to achieve thorough coverage, and for quicker knockdown of larvae. For control of light to moderate infestations, begin applications before egg hatch of each generation and before the larvae penetrate the fruit. The product provides 10 to 18 days of protection depending upon application rate and how rapidly fruit is expanding.	• Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 14 days

Cucurbit Vegetables (Crop Group 9)[1]

(Not registered for use in New York)

[1]Cucurbit vegetables (crop group 9) including balsam apple, balsam pear, bitter melon, chayote (fruit), Chinese cucumber, Chinese waxgourd (Chinese preserving melon), citron melon, cucumber, edible gourd (including Chinese okra, cucuzza, hechima, hyotan), gherkin, muskmelon (including cantaloupe, casaba, crenshaw melon, golden pershaw melon, honey balls, honeydew melon, mango melon, persian melon, pineapple melon, santa claus melon, snake melon, true cantaloupe), pumpkin, summer squash (including crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini), winter squash (including acorn squash, butternut squash, calabaza, hubbard squash, spaghetti squash), watermelon.

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
beet armyworm cabbage looper melon worm pickle worm rind worm southern armyworm true armyworm yellowstriped armyworm	4-10 fl oz/A (0.06-0.16 lb ai/A)	Apply at first sign of infestation, targeting eggs and small larvae, or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.	• Do not apply more than a total of 64 fl oz (1 lb ai) per acre per year. • Do not make more than 4 applications per acre per year. • **Minimum Re-treatment Interval:** 7 days • **PHI:** 3 days • See **Rotational Crop Restrictions**

Dates

(Not registered for use in New York)

Ground Application: Apply a minimum of 100 gallons per acre. Equipment and spray volume should be calibrated to assure uniform coverage of infested parts of the crop.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
carob moth	10-20 fl oz/A (0.16-0.31 lb ai/A)	For control of light to moderate infestations, begin applications before egg hatch of each generation and before the larvae penetrate the fruit. Once applied, the product provides 10 to 18 days of protection depending upon application rate and how rapidly fruit is expanding. Consult local spray timing advisories or follow biofix dates based on pheromone trap catches to time sprays appropriately. For continuous moth flight and egg laying, use the highest labeled rate. Maintain coverage on the fruit surface with 10 to 18 day re-treatment intervals. Alternate or intersperse with other insecticides with different modes of action targeted for the same pest so long as the re-treatment interval does not exceed the period of effectiveness of the products being alternated and Zylo Insecticide is applied before larvae penetrate the fruit.	• Do not apply more than 20 fl oz per acre per application or total of 64 fl oz (1 lb ai) per acre per year. • Do not make more than 3 applications per acre per year. • **Minimum Re-treatment Interval:** 10 days • **PHI:** 7 days

Fruiting Vegetables (Crop Group 8-10)[1]

(Not registered for use in New York)

[1] Fruiting vegetables (crop group 8-10) including African eggplant, bell pepper, bush tomato, cocona, currant tomato, eggplant, garden huckleberry, goji berry, groundcherry, hot pepper, martynia, naranjilla, nonbell pepper, okra, pea eggplant, pepino, pimento pepper, roselle, scarlet eggplant, sunberry, sweet pepper, tomatillo, tomato, tree tomato, cultivars, varieties and/or hybrids of these.

Ground Application: Apply in a minimum of 10 gallons per acre by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gallons per acre to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gallons per acre.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
beet armyworm cabbage looper European corn borer fall armyworm southern armyworm tomato hornworm true armyworm western yellowstriped armyworm yellowstriped armyworm	4-8 fl oz/A (0.06-0.12 lb ai/A)	For early season applications only to young crops and small plants. Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.	• Do not apply more than 16 fl oz per acre per application or total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 1 day • See **Rotational Crop Restrictions**
	8-16 fl oz/A (0.12-0.25 lb ai/A)	For mid- to late-season applications, heavier infestations, and under conditions in which thorough coverage is more difficult. For heavy infestations, continuous moth flights, and/or egg masses and larvae in all stages of development, a 7 to 14 day re-treatment intervals is required to protect new growth until moth flights and/or larval infestations subside.	
tomato fruitworm (suppression only)	10-16 fl oz/A (0.16-0.25 lb ai/A)	Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities. May provide partial control when infestations reach high levels.	
tomato pinworm (suppression only)	10-16 fl oz/A (0.16-0.25 lb ai/A)	Leafmining and infestations of leafmining phase are reduced when applied at initiation of egg laying.	

Globe Artichoke

(Not registered for use in New York)

Ground Application: Apply in a minimum of 75 gpa of water using calibrated ground application equipment that provides thorough coverage.

Aerial Application: Apply in a minimum of 10 gpa of water. Use higher water volumes for heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworm plume moth	4-16 fl oz/A (0.06-0.25 lb ai/A)	Apply at egg hatch or when first signs of feeding occur. Use a higher rate for heavier infestations and under conditions in which thorough coverage is more difficult. Under conditions of heavy infestations, continuous moth flights and/or egg masses and larvae in all stages of development, reapply Zylo Insecticide or another effective product at a minimum application interval of 7 days to protect new growth until moth flights subside.	• Do not apply more than a total of 64 fl oz (1 lb ai) per acre per year. • Do not make more than 4 applications per acre per year. • **PHI:** 4 days

Grape

(Not registered for use in New York)

Ground Application: Apply in a minimum of 40 gpa by conventional airblast or over the row sprayer. If using other type of sprayer, apply in sufficient carrier volume to ensure thorough, uniform cover of the crop. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 20 gpa. This method should not be used if the density of the foliage prohibits thorough, uniform coverage of the entire vine canopy.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
grape berry moth	8-16 fl oz/A (0.12-0.25 lb ai/A)	For internal feeding lepidoptera larvae, apply at initiation of egg hatch for each generation. Reapply within 10 to 18 days to ensure complete coverage of rapidly expanding fruits or foliage.	• Do not apply more than 16 fl oz per acre per application or total of 48 fl oz (0.75 lb ai) per acre per year. • **PHI:** 30 days
European grapevine moth grape leaf folder light brown apple moth obliquebanded leafroller omnivorous leafroller orange tortrix redbanded leafroller		**Spring generation:** Apply at first sign of larval infestation or to small larvae when threshold levels occur. **Summer generation:** For each generation, apply at first egg hatch. Reapply at 10 to 14 day intervals under high pressure or sustained moth flight.	

Grass Forage, Fodder, and Hay (Crop Group 17)

(Not registered for use in New York)

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 5 gpa. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworms	4-8 fl oz/A (0.06-0.12 lb ai/A)	Begin applications when first signs of feeding damage appear or when threshold levels of feeding damage occur. Use a higher rate for heavier infestations and under conditions in which thorough coverage is more difficult.	• Do not apply more than a total of 32 fl oz (0.5 lb ai) per acre per year. • Do not make more than 1 application cutting. • **PHI-Hay:** 7 days • **PHI-Forage:** 0 days. Livestock can enter and graze on treated area immediately after application. • See **Rotational Crop Restrictions**

Green Onion (Subgroup 3-07B)[1], Except Chive (Fresh Leaves)

(Not registered for use in New York)

[1]Green onion (subgroup 3-07B) including beltsville bunching onion, Chinese chive (fresh leaves), elegans hosta, fresh onion, fritillaria leaves, green onion, kurrat, lady's leek, leek, macrostem onion, shallot (fresh leaves), tree onion (tops), wild leek.

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
lepidopteran larvae including: armyworms European corn borer loopers	4-8 fl oz/A (0.06-0.12 lb ai/A)	For early season applications only to young crops and small plants. Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.	• Do not apply more than 12 fl oz per acre per application or total of 64 fl oz (1 lb ai) per acre per year. • Do not make more than 6 applications per acre per year. • **PHI:** 1 day • See **Rotational Crop Restrictions**
	8-12 fl oz/A (0.12-0.19 lb ai/A)	For mid- to late-season applications, heavier infestations, and under conditions in which thorough coverage is more difficult. For heavy infestations, continuous moth flights, and/or egg masses and larvae in all stages of development, re-application can be made at a minimum 10 day re-treatment interval to protect new growth until moth flights and/or hits subside.	

Herbs (Fresh and Dried) (Subgroup 19A)[1]

(Not registered for use in New York)

[1]Herbs (fresh and dried) (subgroup 19A) including angelica, annual marjoram, balm, basil, borage, burnet, camomile, catnip, chervil (dried), chive, coriander (leaf), costmary, culantro (leaf), curry (leaf), dillweed, horehound, hyssop, lavender, lemongrass, lovage (leaf), marigold, marjoram, nasturtium, oregano, parsley (dried), pennyroyal, pot marjoram, rosemary, rue, sage, summer savory, sweet bay, sweet marjoram, tansy, tarragon, thyme, wild marjoram, wintergreen, winter savory, woodruff, wormwood.

Ground Application: Apply in a minimum of 10 gallons per acre by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gallons per acre to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gallons per acre.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
beet armyworm cabbage looper cutworms (suppression only) fall armyworm garden webworm imported cabbageworm southern armyworm true armyworm yellowstriped armyworm	4-8 fl oz/A (0.06-0.12 lb ai/A)	For early season applications only to young crops and small plants. Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.	• Do not apply more than 16 fl oz per acre per application or total of 64 fl oz (1 lb ai) per acre per year. • **Minimum Re-treatment Interval:** 10 days • **PHI:** 1 day • See **Rotational Crop Restrictions**
beet armyworm cabbage looper cabbage webworm cross-striped cabbageworm cutworms (suppression only) fall armyworm garden webworm imported cabbageworm southern armyworm true armyworm yellowstriped armyworm	8-10 fl oz/A (0.12-0.16 lb ai/A)	For mid- to late-season applications, heavier infestations, and under conditions in which thorough coverage is more difficult. For heavy infestations, continuous moth flights, and/or egg masses and larvae in all stages of development, a 10 to 14 day re-treatment interval is required to protect new growth until moth flights and/or hits subside.	
diamondback moth (suppression only)	12-16 fl oz/A (0.19-0.25 lb ai/A)	Infestations and crop damage are reduced when applied at initiation of egg laying.	

Legume Vegetables (Succulent or Dried) (Crop Group 6)[1] and Foliage of Legume Vegetables (Except Soybean) (Subgroup 7A)[2]

(Not registered for use in New York)

[1]Legume vegetables (succulent or dried) (crop group 6) including asparagus bean, blackeyed pea, *Cajanus* spp. (pigeon pea), Chinese longbean, Cicer arietinum (chick peas, garbanzo beans), cowpea, green lima bean, jackbean, *Lens* spp. (lentils), *Lupinus* spp. (grain lupine, sweet lupine, white lupine, white sweet lupine), moth bean, *Phaseolus* spp. (kidney beans, lima beans, mung beans, navy beans, pinto beans, snap beans, wax beans), *Pisum* spp. (dwarf pea, edible-pod pea, English pea, field pea, garden pea, green pea), runner bean, snap bean, snow pea, soybean (immature seed), southern pea, succulent broad bean, sugar snap pea, sword bean, Vicia faba (broad beans, fava beans); *Vigna* spp. (asparagus beans, blackeyed pea, cowpeas), wax bean, yardlong bean.

Foliage of legume vegetables (except soybean) (subgroup 7A) including any cultivar of bean and field pea (except soybean).

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

Resistance Management: To reduce the potential for resistance development in target pest species, do not make more than two consecutive applications of Zylo Insecticide. If additional treatments are required after two consecutive applications of Zylo Insecticide, rotate to another class of effective insecticides for at least one application and utilize Integrated Pest Management practices such as routine monitoring, treatment thresholds to time applications, and cultural and biological controls whenever possible. Consult your extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
alfalfa looper beet armyworm cabbage looper European corn borer fall armyworm southern armyworm tomato hornworm true armyworm western yellowstriped armyworm yellowstriped armyworm	4-8 fl oz/A (0.06-0.12 lb ai/A)	For early season applications only to young crops and small plants. Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.	• Do not apply more than 16 fl oz per acre per application or total of 64 fl oz (1 lb ai) per acre per year. • Do not make more than 4 applications per acre per year. • Do not use adjuvants in the tank mix when applying this product to dry peas and beans. • Do not apply to dry peas by aerial ULV. • **Minimum Re-treatment Interval:** 7 days • **PHI:** 7 days • See **Rotational Crop Restrictions**
alfalfa looper beet armyworm cabbage looper European corn borer fall armyworm southern armyworm tomato hornworm true armyworm western yellowstriped armyworm yellowstriped armyworm	8-16 fl oz/A (0.12-0.25 lb ai/A)	For mid- to late-season applications, heavier infestations, and under conditions in which thorough coverage is more difficult. For heavy infestations, continuous moth flights, and/or egg masses and larvae in all stages of development, a 7 to 14 day re-treatment interval is required to protect new growth until moth flights and/or larval infestations subside.	
corn earworm *(Helicoverpa/Heliothis)* (suppression only)	10-16 fl oz/A (0.16-0.25 lb ai/A)	Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities. May provide partial control when infestations reach high levels.	
tomato pinworm (suppression only)		Leafmining and infestations of leafmining phase are reduced when applied at initiation of egg laying.	

Low Growing Berry (Except Cranberry) (Crop Group 13-07G)[1]

(Not registered for use in New York)

[1] Low growing berry (except cranberry) (crop group 13-07G) including bearberry, bilberry, cloudberry, lingonberry, lowbush blueberry, muntries, partridgeberry, strawberry, cultivars, varieties, and/or hybrids of these.

Ground Application: Apply in a minimum of 10 gallons per acre by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gallons per acre to densely foliated or difficult cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gallons per acre.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworms, including corn earworm (suppression only) cutworms (suppression only)	6-12 fl oz/A (0.09-0.19 lb ai/A)	For early season applications to young crops and small plants. Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities. For heavy infestations, continuous moth flights and/or egg masses and larvae in all stages of development, a 10 to 14 day re-treatment interval is required to protect new growth until moth flights and/or hits subside.	• Do not apply more than a total of 12 fl oz (0.19 lb ai) per application or a total of 64 fl oz (1 lb ai) acre per year. • **Minimum Re-treatment Interval:** 10 days • **PHI:** 3 days • See **Rotational Crop Restrictions**

Nongrass Forage, Fodder, Straw and Hay (Crop Group 18)[1]

(Not registered for use in New York)

[1] Nongrass forage, fodder, straw and hay (crop group 18) including alfalfa, clover, crown vetch, kudzu, lespedeza, lupin, milk vetch, sainfoin, trefoil, velvet bean, vetch.

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 5 gpa. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworms, including beet fall southern striped true western yellowstriped alfalfa caterpillar alfalfa looper webworms	4-8 fl oz/A (0.06-0.12 lb ai/A)	Begin applications when first signs of feeding damage appear or when threshold levels of feeding damage occur. Use a higher rate for heavier infestations and under conditions in which thorough coverage is more difficult.	• Do not apply more than a total of 32 fl oz (0.5 lb ai) per acre per year. • Do not make more than 1 application per cutting. • Livestock can enter and graze on treated area immediately after application. • **PHI-Forage:** 0 days • **PHI-Hay:** 7 days • See **Rotational Crop Restrictions**

Peanut

(Not registered for use in New York)

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 5 gpa. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworms cabbage looper green clover worm saltmarsh caterpillar soybean loopers velvet bean caterpillar	6-10 fl oz/A (0.09-0.16 lb ai/A)	Apply when first signs of feeding damage appear or when threshold levels of feeding damage occur.	• Do not apply more than a total of 64 fl oz (1 lb ai) per acre per year. • Do not make more than 3 applications per acre per year. • **Minimum Re-treatment Interval:** 7 days • **PHI:** 7 days • See **Rotational Crop Restrictions**

Pineapple

(For Use only in Hawaii)

Application Rate: Apply as a foliar spray at the rate indicated to control target pests. Heavy infestations may require repeat applications, but follow resistance management guidelines.

Application Volume: Apply in spray volume which will provide thorough crop coverage.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
suppression of lepidopterous larvae such as: armyworms banana moth *Batrachedra commosae* *Elaphria nucicolora* fruit borer caterpillar *(Thecla basilides;* *Strymon basilides)* pineapple caterpillar pink cornworm sugarcane bud moth	4-7 fl oz/A (0.06-0.10 lb ai/A)	For determining when to treat, scout with enough regularity to monitor the population size of each of the labeled pests. Treat when pests appear, targeting eggs at hatch or small larvae. Consult your extension specialist, certified crop advisor or your state agricultural experiment station for any additional local use recommendations for your area.	• Do not apply more than a total of 28 fl oz (0.44 lb ai) per acre per year. • Do not make more than 4 application per year. • **Minimum Re-treatment Interval:** Do not make applications less than 7 days apart. • **PHI:** 3 days

Pome Fruits (Crop Group 11-10)[1]

[1]Pome fruit (crop group 11-10) including apple, Asian pear, azarole, crabapple, loquat, mayhaw, medlar, pear, quince, tejocote, cultivars, varieties, and/or hybrids of these.

For best protection, begin applications before egg hatch of each generation. For pests that penetrate fruit apply before the larval hatch and penetrate the fruit. Zylo Insecticide may provide 10 to 18 days of protection depending upon application rate and how rapidly fruit and/or leaves are expanding. Most effective crop protection results when an application is made at the initiation of egg hatch. For heavy infestations, continuous moth flight and egg laying, or extended egg hatch, use the maximum specified rates. Maintain coverage on the fruit surface with 10 to 18 day re-treatment intervals.

Zylo Insecticide may also be used in a program approach alternated or interspersed with other insecticides. Make sure the re-treatment interval does not exceed the period of effectiveness of the alternate products and Zylo Insecticide.

Consult local spray timing advisories or follow biofix dates based upon pheromone trap catches to time sprays appropriately.

Ground Application: Apply by conventional ground sprayers which are calibrated to deliver a minimum of 50 gallons per acre to trellised trees or trees 10 feet tall or less. For trees greater than 10 feet tall, use a minimum of 100 gallons per acre.

Aerial Application: Aerial application is allowed only for the last two applications prior to harvest. Apply in a minimum of 20 gallons per acre. Zylo Insecticide can be applied by aerial applications when conditions warrant. However, this method should not be used if the size of the tree or density of the foliage prohibits thorough, uniform coverage of the entire tree canopy.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
codling moth (suppression only) For use against low to moderate infestations in conjunction with alternate control measures such as in established mating disruption blocks.	16 fl oz/A (0.25 lb ai/A)	For each generation, apply at the initiation of egg lay (usually occurs at 100 to 200 DD, base 50°F, following biofix). Reapply 10 to 18 days later.	• Do not apply more than a total of 64 fl oz (1 lb ai) per acre per year. • Aerial application is allowed **only** for the last two applications prior to harvest. • **PHI:** 14 days
lesser appleworm oriental fruit moth	12-16 fl oz/A (0.19-0.25 lb ai/A)		
obliquebanded leafroller pandemis leafroller	8-16 fl oz/A (0.12-0.25 lb ai/A)	**Spring (overwintering) generation:** Make 1 to 2 applications during the pink to petal fall period depending upon infestation level. **Summer generation:** Make the first application during the period of peak egg lay to early egg hatch (usually 200 to 400 DD following biofix). Reapply 10 to 18 days later (usually 500 to 700 DD).	
eyespotted bud moth fruittree leafroller light brown apple moth redbanded leafroller variegated leafroller		For control of surface or foliar feeding leafroller larvae, apply when larvae are feeding.	
tufted apple bud moth	6-10 fl oz/A (0.09-0.16 lb ai/A)	For each generation, apply at 10 to 30% egg hatch.	
spotted tentiform leafminer western tentiform leafminer	8-12 fl oz/A (0.12-0.19 lb ai/A)	**First generation:** Apply at pink to petal fall. **Second, third generation:** Apply at early egg hatch for each generation.	
lacanobia fruitworm	12 fl oz/A (0.19 lb ai/A)	Apply at egg hatch or at the first sign of larval infestation. Reapply within 10 to 14 days.	

Pomegranate

(Not registered for use in New York)

Ground Application: Apply a minimum of 50 gpa by conventional ground equipment to trellised trees or trees 10 feet tall or less. For trees greater than 10 feet tall, use a minimum of 100 gpa. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 20 gpa. This method should not be used if the size of the tree or density of the foliage prohibits thorough, uniform coverage of the entire tree canopy.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
European grapevine moth filbert worm light brown apple moth navel orangeworm obliquebanded leafroller omnivorous leafroller	8-16 fl oz/A (0.12-0.25 lb ai/A)	Apply when larvae are feeding. Most effective crop protection results from application made at the initiation of egg hatch. The higher rates in the rate range and additional applications at 10 to 18 day intervals may be required for heavy infestations, sustained moth flight, situations in which it is difficult to achieve thorough coverage, and for quicker knockdown of larvae.	• Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 7 days
redhumped caterpillar		Apply at initiation of egg hatch or at the first sign of larval infestation. Reapply in 10 to 14 days to ensure complete coverage of rapidly expanding fruits or foliage.	

Popcorn

(Not registered for use in New York)

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa after initiation of tasseling. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gallons per acre.

Resistance Management: To reduce the potential for resistance development in target pest species, do not make more than two consecutive applications of Zylo Insecticide. If additional treatments are required after two consecutive applications of Zylo Insecticide, rotate to another class of effective insecticides for at least one application and utilize Integrated Pest Management practices such as routine monitoring, treatment thresholds to time applications, and cultural and biological controls whenever possible. Consult your extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area.

Pests	Application Rate *(fl oz/acre)*	*Application Timing*	*Restrictions*
European corn borer southwestern corn borer	4-8 fl oz/A (0.06-0.12 lb ai/A)	Apply at first sign of egg hatch or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities. Direct application at the whorl for early season (first generation) infestations. Apply as broadcast or multinozzle over the row application to mid- and late-season infestations.	• Do not apply more than 8 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • Do not apply to popcorn by aerial ULV. • **PHI-Grain & Stover:** 21 days • **PHI-Popcorn Forage:** 0 days • See **Rotational Crop Restrictions**
true armyworm western bean cutworm		Apply at first sign of egg hatch (field corn), feeding damage (sweet corn), or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities. Under heavy infestations, continuous moth flights, or rapid crop growth and development, reapply at 5 to 10 day re-treatment intervals.	

Root Vegetables (Subgroups 1A, 1B)[1]

(Not registered for use in New York)

[1]Root vegetables (subgroups 1A, 1B) including black salsify, carrot, celeriac, chicory, edible burdock, garden beet, ginseng, horseradish, parsnip, oriental radish, radish, rutabaga, salsify, skirret, Spanish salsify, sugar beet, turnip, turnip-rooted chervil, and turnip-rooted parsley.

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworms cabbageworms cutworm (suppression only) loopers saltmarsh caterpillar webworms	8-16 fl oz/A (0.12-0.25 lb ai/A)	Apply at egg hatch or when first signs of feeding occur. Use a higher rate for heavier infestations and under conditions in which thorough coverage is more difficult. Under heavy infestations, continuous moth flights and/or egg masses and larvae in all stages of development, reapply to protect new growth until moth flights and/or hits subside.	• Do not apply more than a total of 64 fl oz (1 lb ai) per acre per year for all crops except radish. • Do not apply more than a total of 32 fl oz (0.5 lb ai) per acre per year for radish. • **Minimum Re-treatment Interval:** 14 days • **PHI-Sugar Beet:** 7 days • **PHI-All Other Root Vegetables:** 1 day • See **Rotational Crop Restrictions**

Small Fruit Vine Climbing (Except Fuzzy Kiwifruit and Grape) (Crop Group 13-07F)[1]

(Not registered for use in New York)

[1]Small fruit vine climbing (except fuzzy kiwifruit and grape) (crop group 13-07F) including amur river grape, gooseberry, hardy kiwifruit, maypop, schisandra berry, cultivars, varieties, and/or hybrids of these.

Ground Application: Apply in a minimum of 40 gallons per acre by conventional airblast or over the row sprayer. If using other type of sprayer, apply in sufficient carrier volume to ensure thorough, uniform cover of the crop. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 20 gallons per acre. This method should not be used if the density of the foliage prohibits thorough, uniform coverage of the entire vine canopy.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
grape berry moth	8-16 fl oz/A (0.12-0.25 lb ai/A)	For internal feeding lepidoptera larvae, apply at initiation of egg hatch for each generation. Reapply within 10 to 18 days to ensure complete coverage of rapidly expanding fruits or foliage.	• Do not apply more than 16 fl oz per acre per application or a total of 48 fl oz (0.75 lb ai) per acre per year. • **PHI:** 30 days
grape leaf folder light brown apple moth omnivorous leafroller obliquebanded leafroller		**Spring generation:** Apply at first sign of larval infestation or to small larvae when threshold levels occur. **Summer generation:** For each generation, apply at first egg hatch. Reapply at 10 to 14 day intervals under high pressure or sustained moth flight.	

Sorghum (Grain and Sweet)

(Not registered for use in New York)

Ground Application: Apply in a minimum of 15 gallons per acre by conventional ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gallons per acre.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
southwestern corn borer sugarcane borer	8-10 fl oz/A (0.12-0.16 lb ai/A)	Apply at first sign of egg hatch or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities. Apply as broadcast or multinozzle over the row application to mid- and late-season infestations.	• Do not apply more than 12 fl oz per acre per application or 48 fl oz (0.75 lb ai) per acre per year. • **Minimum Re-treatment Interval:** 14 days • **PHI-Forage & Sweet Sorghum Stalk:** 3 days • **PHI-Grain & Stover:** 21 days • See **Rotational Crop Restrictions**

Soybean

(Not registered for use in New York)

Ground Application: Apply in a minimum spray volume of 10 gpa using calibrated ground application equipment that provides thorough coverage.

Aerial Application: Apply in a minimum spray volume of 5 gpa in equipment that has been properly patterned and calibrated for environmental conditions at the site. Use higher water volumes for heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworms green clover worm saltmarsh caterpillar soybean loopers velvet bean caterpillar	4-8 fl oz/A (0.06-0.12 lb ai/A)	Begin applications when first signs of feeding damage appear or when threshold levels of feeding damage occur. Use a higher rate for heavier infestations and under conditions in which thorough coverage is difficult to achieve.	• Do not apply more than a total of 64 fl oz (1 lb ai) per acre per year. • Do not make more than 4 applications per year. • **Re-planting Interval:** A 7 day replanting interval is required for residues of methoxyfenozide. • **PHI-Hay & Forage:** 7 days • **PHI-Seed Harvest:** 14 days

Spearmint and Peppermint

(Not registered for use in New York)

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 5 gpa. Calibrate aircraft to assure uniform coverage of the target crop.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworms cutworms loopers	10-16 fl oz/A (0.16-0.25 lb ai/A)	Scout crops on a regular basis and treat as soon as economic thresholds have been met. Target small larvae and egg masses when possible. Use a higher rate in the rate range for high infestations and when extended residual is needed. Reapply at 14 to 21 day intervals when there are continuing infestations.	• Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 14 days

Stone Fruits (Crop Group 12-12)[1]

(Not registered for use in New York)

[1]Stone fruits (crop group 12-12) including American plum, apricot, beach plum, black cherry, Canada plum, capulin, cherry plum, cherry (sweet, sour), cherry (tart) chickasaw plum, Chinese Jujube, Damson plum, Japanese apricot, Japanese plum, Klamath plum, Nanking cherry, nectarine, peach, plum, plumcot, prune plum, sloe, cultivars, varieties, and/or hybrids of these.

Ground Application: Apply in a minimum of 50 gpa by conventional ground equipment to trellised trees or trees 10 feet tall or less. For trees greater than 10 feet tall, use a minimum of 100 gpa. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 20 gpa. This method should not be used if the size of the tree or density of the foliage prohibits thorough, uniform coverage of the entire tree canopy.

Stone Fruits (Except Sweet and Sour Cherries)

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
codling moth (suppression only) oriental fruit moth	10-16 fl oz/A (0.16-0.25 lb ai/A)	For control of light to moderate infestations, begin applications before egg hatch of each generation and before the larvae penetrate the fruit. The product provides 10 to 18 days of protection depending upon application rate and how rapidly fruit is expanding. Consult local spray timing advisories or follow biofix dates based upon pheromone trap catches to time sprays appropriately. For continuous moth flight and egg laying, use the highest labeled rate. Maintain coverage on the fruit surface with 10 to 18 day re-treatment intervals. Alternate or intersperse with other insecticides targeted at the same pest so long as the re-treatment interval does not exceed the period of effectiveness of the products being alternated and Zylo Insecticide is applied before larvae penetrate the fruit.	• Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 7 days
peach twig borer	8-16 fl oz/A (0.12-0.25 lb ai/A)	For each generation, apply at initiation of egg hatch before larvae enter the fruit. Reapply in 10 to 14 days to ensure complete coverage of rapidly expanding fruits or foliage, or under conditions of high infestation or sustained moth flight.	
obliquebanded leafroller pandemis leafroller		**Spring (overwintering) generation:** Make 1 to 2 applications during the pink to petal fall period depending upon infestation level. **Summer generation:** Make the first application during the period of peak egg lay to early egg hatch (usually 200 to 400 DD following biofix). Reapply 10 to 18 days later (usually 500 to 700 DD). A higher rate in the rate range and additional applications at 10 to 18 day intervals may be required for heavy infestations, sustained moth flight, situations in which it is difficult to achieve thorough coverage, and for quicker knockdown of larvae.	
European grapevine moth fruittree leafroller light brown apple moth omnivorous leafroller redbanded leafroller threelined leafroller tufted apple budmoth variegated leafroller		For control of surface or foliar feeding leafroller larvae, apply when larvae are feeding. Most effective crop protection results from application made at the initiation of egg hatch. For heavy infestations, continuous moth flights, or extended egg hatch, use maximum specified rates. Maintain coverage with 10 to 18 day re-treatment intervals.	
cherry fruitworm green fruitworm lesser appleworm	10-16 fl oz/A (0.16-0.25 lb ai/A)	Apply at initiation of egg hatch or at the first sign of larval infestation. Reapply in 10 to 14 days to ensure complete coverage of rapidly expanding fruits or foliage.	
redhumped caterpillar	8-16 fl oz/A (0.12-0.25 lb ai/A)		

Cherries (Sweet and Sour)

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
obliquebanded leafroller pandemis leafroller	8-16 fl oz/A (0.12-0.25 lb ai/A)	**Spring (overwintering) generation:** Make 1 to 2 applications during the pink to petal fall period depending upon infestation level. **Summer generation:** Make the first application during the period of peak egg lay to early egg hatch (usually 200 to 400 DD following biofix). Reapply 10 to 18 days later (usually 500 to 700 DD). A higher rate in the rate range and additional applications at 10 to 18 day intervals may be required for heavy infestations, sustained moth flight, situations in which it is difficult to achieve thorough coverage, and for quicker knockdown of larvae.	• Do not apply more than 16 fl oz per acre per application or more than a total of 58 fl oz (0.9 lb ai) per acre per year. • **PHI:** 7 days
eyespotted bud moth fruittree leafroller light brown apple moth omnivorous leafroller redbanded leafroller threelined leafroller tufted apple budmoth variegated leafroller		For control of surface or foliar feeding leafroller larvae, apply when larvae are feeding. Most effective crop protection results from application made at the initiation of egg hatch. For heavy infestations, continuous moth flights, or extended egg hatch, use maximum specified rates. Maintain coverage with 10 to 18 day re-treatment intervals.	
cherry fruitworm	10-16 fl oz/A (0.16-0.25 lb ai/A)	Apply at initiation of egg hatch or at the first sign of larval infestation. Reapply in 10 to 14 days to ensure complete coverage of rapidly expanding fruits or foliage.	
redhumped caterpillar	8-16 fl oz/A (0.12-0.25 lb ai/A)		

Tree Nuts (Crop Group 14-12)[1]

(Not registered for use in New York)

[1]Tree nuts (crop group 14-12) including African nut-tree, almond, beech nut, Brazil nut, Brazilian pine, bunya, bur oak, butternut, Cajou nut, candlenut, cashew, chestnut, chinquapin, coconut, coquito nut, dika nut, filbert (hazelnut), ginkgo, Guiana chestnut, heartnut, hickory nut, Japanese horse chestnut, macadamia (bush) nut, mongongo nut, monkey-pot, monkey puzzle nut, Okari nut, Pachira nut, peach palm nut, pecan, pequi, Pili nut, pine nut, pistachio, Sapucaia nut, tropical almond, walnut (black and English), yellowhorn and cultivars, and varieties and/or hybrids of these.

Ground Application: Apply in a minimum of 50 gpa by conventional ground equipment to trees 10 feet tall or less. For trees greater than 10 feet tall, use a minimum of 100 gpa. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa. This method may result in reduced efficacy if the size of the tree or density of the foliage prohibits thorough, uniform coverage of the entire tree canopy.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
ALMONDS			
peach twig borer	8-16 fl oz/A (0.12-0.25 lb ai/A)	**Spring (overwintering) generation:** Make 1 to 2 applications during the bloom to petal fall period depending upon infestation level. **Summer generation:** Begin applications at peak moth flight (400 to 450 DD, base 50°F, following biofix). Reapply at 4 to 18 day intervals under high pressure or sustained moth flight. A higher rate in the rate range may be required for extended residual effectiveness, high pest infestation levels, larger trees, or heavy dense foliage.	• Do not apply more than 24 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 14 days
navel orangeworm	12-24 fl oz/A (0.19-0.38 lb ai/A)	Make first application at the initiation of hull split (2 to 5% hull split). Reapply 14 days later. Under heavy infestation, reapply a third time 14 days later.	
HAZELNUTS			
filbertworm	8-16 fl oz/A (0.12-0.25 lb ai/A)	Apply at initiation of egg hatch. Reapply at 14 to 21 day intervals under high pressure or sustained moth flight.	• Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 14 days
obliquebanded leafroller		**Spring (overwintering) generation:** Make 1 to 2 applications depending upon infestation level. **Summer generation:** Make the first application during the period of peak egg lay to early egg hatch (200 to 400 DD following biofix). Reapply 14 to 18 days later (usually 500 to 700 DD).	
European grapevine moth filbert leafroller light brown apple moth omnivorous leaftier		For control of surface of foliar feeding leafroller larvae, apply when larvae are feeding. Most effective crop protection results from application made at the initiation of egg hatch.	
WALNUTS			
codling moth (suppression only)	12-24 fl oz/A (0.19-0.38 lb ai/A)	For each generation, apply at initiation of egg hatch (100 to 200 DD following biofix). Control of first generation may require second application (14 to 18 day re-treatment intervals) to ensure complete coverage of rapidly expanding nuts and foliage. After nut growth and foliage expansion slows, a 14 to 21 day re-treatment interval may be required to provide control of extended moth flight. A higher rate in the rate range may be required for extended residual effectiveness, high pest infestation levels, larger trees, or heavy dense foliage.	• Do not apply more than 24 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 14 days
navel orangeworm	8-16 fl oz/A (0.12-0.25 lb ai/A)	Apply at initiation of egg hatch.	
fall webworm redhumped caterpillar		Apply at first sign of larval infestation.	

(continued)

Tree Nuts (Crop Group 14-12)[1] *(continued)*

(Not registered for use in New York)

[1]Tree nuts (crop group 14-12) including African nut-tree, almond, beech nut, Brazil nut, Brazilian pine, bunya, bur oak, butternut, Cajou nut, candlenut, cashew, chestnut, chinquapin, coconut, coquito nut, dika nut, filbert (hazelnut), ginkgo, Guiana chestnut, heartnut, hickory nut, Japanese horse chestnut, macadamia (bush) nut, mongongo nut, monkey-pot, monkey puzzle nut, Okari nut, Pachira nut, peach palm nut, pecan, pequi, Pili nut, pine nut, pistachio, Sapucaia nut, tropical almond, walnut (black and English), yellowhorn and cultivars, and varieties and/or hybrids of these.

Ground Application: Apply in a minimum of 50 gpa by conventional ground equipment to trees 10 feet tall or less. For trees greater than 10 feet tall, use a minimum of 100 gpa. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa. This method may result in reduced efficacy if the size of the tree or density of the foliage prohibits thorough, uniform coverage of the entire tree canopy.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
PECANS			
pecan nut casebearer	4-8 fl oz/A (0.06-0.12 lb ai/A)	For each generation, apply at initiation of egg hatch (first generation is approximately 8 to 15 days following biofix). Control of first generation may require second application to ensure complete coverage of rapidly expanding nuts and foliage, or under conditions or extended egg lay. A higher rate in the rate range may be required for extended residual effectiveness, higher pest infestations, low crop load, larger trees, or heavy dense foliage.	• Do not apply more than 8 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 14 days
hickory shuckworm		For early- to mid-season infestations reaching threshold levels as defined by state extension specialists or other qualified authorities, make applications at the initiation of egg hatch. For late-season infestations, initiate applications at halfshell hardening. Reapply at 14 day intervals to shuck split or while nuts are susceptible to heavy infestations.	
fall webworm walnut caterpillar		Apply at the first sign of larval infestation.	

Tree Nut Crops not Specifically Listed Above

Restrictions for control of lepidoptera larvae for which Zylo Insecticide is registered:

- Do not apply more than 24 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year.
- **PHI:** 14 days.

Performance of Zylo Insecticide against pests not listed on this label cannot be warranted nor can crop tolerance in all types and varieties of tree nuts be assured. If unsure, the user is advised to treat a few trees to observe for symptoms before treating large blocks of trees. Generally, optimum performance against lepidoptera pests (worms) is achieved when Zylo Insecticide is applied at the initiation of egg hatch. Re-application intervals of 14 to 20 days may be required if the plant part(s) to be protected from insect damage is rapidly growing or expanding or if pest infestations are heavy or extended.

Tropical Tree Fruits[1]

(Not registered for use in New York)

[1] Tropical tree fruits including acerola, atemoya, avocado, biriba, black sapote, canistal, cherimoya, custard apple, feijoa, guava, ilama, jaboticaba, longan, lychee, mamey sapote, mango, papaya, passionfruit, pulasan, rambutan, sapodilla, soursop, Spanish lime, star apple, starfruit, sugar apple, wax jambu.

Ground Application: Apply in a minimum of 50 gpa by conventional ground equipment to trees 10 feet tall or less. For trees greater than 10 feet tall, apply in a minimum of 100 gpa by conventional ground equipment. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
lepidopteran larvae including European grapevine moth guava moth *(Argyresthia)* leafrollers light brown apple moth loopers orange tortrix spanworms webbing worms western tussock moth	10-16 fl oz/A (0.16-0.25 lb ai/A)	Apply at egg hatch or when first signs of feeding occur. Use a higher rate for heavier infestations and under conditions in which thorough coverage is difficult to achieve. Under heavy infestations, continuous moth flights and/or egg masses and larvae in all stages of development, reapply at a 6 to 10 day re-treatment intervals to protect new growth until moth flights and/or hits subside.	• Do not apply more than a total of 64 fl oz (1 lb ai) per acre per year. • Do not make more than 5 applications per year. • **Acerola, Feijoa, Guava, Jaboticaba, Passionfruit, Starfruit, Wax Jambu** **Minimum Re-treatment Interval:** 6 days **PHI:** 3 days • **Atemoya, Avocado, Biriba, Cherimoya, Custard Apple, Ilama, Soursop, Sugar Apple** **Minimum Re-treatment Interval:** 6 days **PHI:** 2 days • **Black Sapote, Canistal, Mamey Sapote, Mango, Papaya, Sapodilla, Star Apple** **Minimum Re-treatment Interval:** 10 days **PHI:** 3 days • **Longan, Lychee, Pulasan, Rambutan, Spanish Lime** **Minimum Re-treatment Interval:** 10 days **PHI:** 14 days

Tuberous and Corm Vegetables (Except Potato) (Subgroup 1D)[1]

(Not registered for use in New York)

[1] Tuberous and corm vegetables (except potato) (subgroup 1D) including arracacha, arrowroot, bitter cassava, chayote (root), Chinese artichoke, chufa, dasheen, edible canna, ginger, Jerusalem artichoke, leren, sweet cassava, sweet potato, tanier, true yam, turmeric, yam bean.

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworms cabbageworms cutworm (suppression only) loopers saltmarsh caterpillar webworms	6-10 fl oz/A (0.09-0.16 lb ai/A)	Apply at egg hatch or when first signs of feeding occur. Use a higher rate for heavier infestations and under conditions in which thorough coverage is more difficult. Under heavy infestations, continuous moth flights and/or egg masses and larvae in all stages of development, reapply to protect new growth until moth flights and/or hits subside.	• Do not apply more than a total of 64 fl oz (1 lb ai) per acre per year. • Do not make more than 3 applications per acre per year. • **Minimum Re-treatment Interval:** 14 days • **PHI:** 7 days • See **Rotational Crop Restrictions**

Ornamentals

(Not registered for use in New York)

Zylo Insecticide controls the listed pests on trees; shrubs; foliage plants and flowers grown in commercial nurseries and greenhouses, in Christmas tree farms, in outdoor landscape areas such as parks, recreational areas, institutional grounds, residential property, etc., and in interior plantscapes. When applied as directed, Zylo Insecticide has shown excellent selectivity on a wide range of ornamental plants. It is impossible, however, to evaluate this product on all ornamentals or under all possible growing conditions. The user should exercise reasonable judgment and caution with this product; until familiar with results under user growing conditions, treat a limited number of plants.

Ground Application: *Apply in a minimum of 50 gpa by conventional ground equipment or hydraulic sprayers. Apply in a minimum of 10 gpa by mist blowers* or air blast sprayers. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Hand Sprayers: Apply in enough water to thoroughly spray plant foliage until runoff.

Zylo Insecticide (fl oz/acre)	Active Ingredient (lb ai/acre)	Equivalent Zylo Insecticide in 1 Gallon of Water (Teaspoon)
4 fl oz/A	0.06 lb ai/A	1/4 teaspoon
8 fl oz/A	0.12 lb ai/A	1/2 teaspoon
16 fl oz/A	0.25 lb ai/A	1 teaspoon

Aerial Application: Apply in a minimum of 20 gpa. Zylo Insecticide can be aerially applied when conditions warrant. However, this method should not be used if the size of the tree or density of the foliage prohibits thorough, uniform coverage of the entire tree canopy. Do not make aerial applications in immediate proximity of residential, commercial, government, institutional or other structures where people may be present including homes, apartments, offices, churches, schools, and businesses. Aerial applicators should evaluate conditions existing at the time of application and make appropriate adjustments to reduce drift. In urban areas, however, use is limited to directed ground or chemical applications.

Chemigation Application: Zylo Insecticide may be applied through sprinkler irrigation systems to control listed pests. Use specified broadcast application rates. See **Chemigation Application** section.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworm bagworms beet armyworm browntail moth codling moth cutworms eastern tent caterpillar elm spanworm eucalyptus caterpillar European grapevine moth fall armyworm fall cankerworm fall webworm Florida fern caterpillar forest tent caterpillar gypsy moth hemlock looper jack pine budworm leafrollers light brown apple moth pine tip moth processionary caterpillar puss caterpillar spruce budworm tussock moth western spruce budworm western tent caterpillar *yellowneck caterpillar* zimmerman pine moth	4-16 fl oz/A (0.06-0.25 lb ai/A)	Begin applications when larvae are observed or at the first sign of feeding damage. Repeat applications on a 10 to 14 day interval or as necessary based upon pest reinfestation. Uniform coverage of the foliage is essential to provide maximum protection from defoliation and reduction of egg mass deposition.	• Do not apply more than a total of 32 fl oz (0.5 lb ai) per acre per year. • Do not make more than 4 applications per acre per year. • Allow at least six hours between application completion and onset of precipitation to assure thorough spray drying.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage and disposal.

Pesticide Storage: Store in a cool dry well-ventilated area, but not below 32°F.

Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Nonrefillable containers 5 gallons or less:

Container Handling: *Nonrefillable container. Do not reuse or refill this container.*

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Refillable containers 5 gallons or larger:

Container Handling: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Nonrefillable containers 5 gallons or larger:

Container Handling: Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

IMPORTANT INFORMATION
READ BEFORE USING PRODUCT

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. and Seller harmless for any claims relating to such factors.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, UNITED PHOSPHORUS, INC. AND SELLER MAKE NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ON THIS LABEL.

To the extent consistent with applicable law, United Phosphorus, Inc. or Seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product and **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF UNITED PHOSPHORUS, INC. AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF UNITED PHOSPHORUS, INC. OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

United Phosphorus, Inc. and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by the duly authorized representative of United Phosphorus, Inc.

Zylo is a trademark of United Phosphorus, Inc.

Rev. 5/23/2017

70506-332(052517-6619)

PROCESSING REQUEST

Reg # 70506-332 **Decision # 522412**

Description: New Methoxyfenozide end-use product.

Electronic Label & Letter (see PPLS):	**OR**	**Non Electronic Label & Letter** (Scanning required):
☒ Dated: 5/23/2017		☐ Dated:

Only one label type should be selected

Other Materials Sent (see jacket):

☒ New CSF(s) Dated: 10/03/2016

☐ Other:

File this coversheet and attached materials in the jacket. It must be well organized and clipped together, NOT STAPLED. Then give the jacket with the coversheet and materials to staff in the Information Services Center (ISC) (Room S-4900). If a jacket is full or only available as an image, please file materials in a new jacket and bring it down to the (ISC). For further information please call 703-605-0716.

Reviewer: Eric Bohnenblust

Division: RD/IVB2

Phone: 347-0426 **Date: 5/23/2017**

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505P)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

NOTICE OF PESTICIDE:
_X_ Registration
___ Reregistration
(under FIFRA, as amended)

EPA Reg. Number:	Date of Issuance:
70506-332	5/23/17

Term of Issuance:
Conditional

Name of Pesticide Product:
Zylo Insecticide

Name and Address of Registrant (include ZIP Code):

Sherry B. Hutcheson
United Phosphorus, Inc.
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A). You must comply with the following conditions:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product under FIFRA when the Agency requires all registrants of similar products to submit such data.

Signature of Approving Official:

Michael Walsh, Product Manager 11
Invertebrate & Vertebrate Branch 2, Registration Division
(7505P)

Date:
5/23/17

EPA Form 8570-6

Registration Notice Conditional v 20150320

2. You are required to comply with the data requirements described in the DCI identified below:

    a. Methoxyfenozide GDCI-121027

    You must comply with all of the data requirements within the established deadlines. If you have questions about the Generic DCI listed above, you may contact the Chemical Review Manager in the Pesticide Reevaluation Division: http://iaspub.epa.gov/apex/pesticides/f?p=chemicalsearch:1

3. Make the following label changes before you release the product for shipment:

    - Revise the EPA Registration Number to read, "EPA Reg. No. 70506-332."

4. Submit one copy of the final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If you fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated 10/03/2016

If you have any questions, please contact Eric Bohnenblust by phone at (703) 347-0426, or via email at Bohnenblust.eric@epa.gov.

Enclosure

GROUP 18 INSECTICIDE

Zylo™ INSECTICIDE

Active Ingredient:
methoxyfenozide: Benzoic acid, 3-methoxy-
2-methyl-,2-(3,5-dimethylbenzoyl)-2-
(1,1-dimethylethyl) hydrazide 22.6%

Other Ingredients:..... 77.4%

Total: 100.0%

Contains 2 lbs methoxyfenozide active ingredient per gallon

Keep Out of Reach of Children

CAUTION

FIRST AID	
If on skin:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes • Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency medical assistance, call the Rocky Mountain Poison and Drug Center at 1-866-673-6671.
For chemical emergency: spill, leak, fire, exposure or accident, call CHEMTREC at 1-800-424-9300.

NET CONTENTS: _____ gal.

United Phosphorus, Inc.
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406
1-800-438-6071

EPA Reg. No. 70506-xxxxx
EPA Est. No. _____

ACCEPTED
05/23/2017
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No 70506-332

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION

Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls

When handlers use closed systems, enclosed cabs or aircraft in a manner that meet the requirements listed in the Worker Protection Standards (WPS) for agricultural pesticides [40 CFR 170.240(d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change clothing.

Environmental Hazards

Drift and runoff from applications of this product may be hazardous to sensitive aquatic invertebrates in water bodies adjacent to the treatment area. For terrestrial uses, do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Methoxyfenozide can contaminate surface water through spray drift. Under some conditions, methoxyfenozide may also have a high potential for runoff into surface water (primarily via dissolution in runoff water) for several months post-application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas over-laying extremely shallow groundwater, areas with in-field canals or ditches that drain to overlaying tile drainage systems that drain to surface water.

Do not cultivate within 10 feet of aquatic areas to allow growth of a vegetative filter strip.

Do not apply by ground within 25 feet, or by air within 150 feet, of lakes, reservoirs, rivers, permanent streams, marshes, or natural ponds; estuaries and commercial fish farm ponds.

Physical and Chemical Hazards

Do not mix or allow coming in contact with oxidizing agents. Hazardous chemical reaction may occur.

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Not for Sale, Use, or Distribution in Nassau County and Suffolk County in New York State.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, is:

- Coveralls
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Keep unprotected persons out of treated area until sprays have dried.

Product Information

Zylo™ insecticide has a unique mode of action that mimics the action of the molting hormone of lepidopterous larvae. Upon ingestion, larval stages of the order lepidoptera undergo an incomplete and developmentally lethal premature molt. This process interrupts and rapidly halts their feeding. Feeding typically ceases within hours of ingestion, although complete mortality of the larvae may take several days. Affected larvae often become lethargic and often develop discolored areas or bands between segments.

Because Zylo insecticide is narrow spectrum insecticide that specifically targets Lepidoptera, it is a good tool for Integrated Pest Management (IPM) programs. The selectivity of Zylo insecticide allows beneficial insects and other arthropods to function unimpeded in the management of secondary pests while Zylo insecticide provides control of troublesome lepidoptera pests. Zylo insecticide belongs to the diacylhydrazine class of insecticides.

Use Rate Determination

Please carefully read and follow all label use rates and restrictions. Always ensure aerial or ground equipment is properly calibrated before use. Prepare only the amount of spray solution required to treat the application acreage.

Use the lower rates for light infestations of the target lepidopterous species and the higher rates for moderate to heavy infestations. Zylo insecticide may be applied in either dilute or concentrate sprays so long as the application equipment is calibrated and adjusted to deliver thorough, uniform coverage. Use the specified amount of Zylo insecticide per acre regardless of the spray volume used.

Mixing Directions

Always shake well before use. Avoid freezing.

Application Rate Reference Table

Application Rate of Zylo insecticide (fl oz/acre)	Active Ingredient Equivalent (lb ai/acre)	Acres per Gallon of Zylo insecticide
4 fl oz/A	0.06 lbs ai/A	32 acres per gallon
6 fl oz/A	0.09 lbs ai/A	21 acres per gallon
8 fl oz/A	0.12 lbs ai/A	16 acres per gallon
10 fl oz/A	0.16 lbs ai/A	13 acres per gallon
12 fl oz/A	0.19 lbs ai/A	11 acres per gallon
16 fl oz/A	0.25 lbs ai/A	8 acres per gallon
24 fl oz/A	0.38 lbs ai/A	5 acres per gallon

Zylo Insecticide – When Used Alone

Mixing order when used alone.

- fill the spray tank 1/3 (one-third) to ½ (one-half) full of clean water;
- slowly pour Zylo insecticide into the spray tank;
- maintain agitation in the spray tank during mixing, loading and application;
- triple rinse empty container, and add rinsate to the spray tank.

Zylo Insecticide – When Used In A Tank Mix

Zylo insecticide is believed to be compatible with most commonly used agricultural insecticides, fungicides, growth regulators, foliar fertilizers and spray adjuvants. However, always conduct a compatibility test whenever preparing a new tank mix by mixing proportional amounts of all spray ingredients in a test jar. Shake the mixture vigorously and allow it to stand for 15 minutes. Rapid precipitation of the ingredients and failure to re-suspend when shaken indicates that the mixture is incompatible and should not be applied.

Mixing Order for Tank Mixes:

- fill the spray tank with water to ¼ (one-fourth) to 1/3 (one-third) of the required spray volume.
- start agitation.
- add different formulation types in the order indicated below, allowing time for complete dispersion and mixing after addition of each product. Allow extra dispersion and mixing time for dry flowable products.

  Add different formulation types in the following order:

  1. Water dispersible granules
  2. Wettable powders
  3. Zylo insecticide and other aqueous suspensions
- Maintain agitation and fill spray tank to ¾ (three-fourths) of total spray volume. Then add:

  4. Emulsifiable concentrates and water-based solutions
  5. Spray adjuvants
  6. Foliar fertilizers
- finish filling the spray tank.
- maintain continuous agitation during mixing, final filling and throughout application. If spraying and agitation must be stopped before the spray tank is empty, the materials may settle to the bottom. Settled materials must be re-suspended before spraying is resumed.

When tank mixing with other products, observe all precautions, use restrictions, and other limitations on the labels for all products involved.

Application Timing

Zylo insecticide activity is expressed primarily through ingestion by the target larvae. Therefore, the timing of application is dependent upon the feeding behavior of the target pest. For cryptic (internal) feeding larvae, application must be made prior to the time that surface feeding occurs, i.e., just prior to initiation of egg hatch. For foliar or surface feeding larvae, application may be made while active feeding is occurring.

Re-application may be required to protect rapidly expanding fruit, new flushes of foliage, or for extended infestations. The re-application interval will vary depending upon how rapidly the crop is growing, the generation time of the target pest and the duration of the infestation.

Zylo insecticide is effective against all larval instars; however, it is best practice to make applications to early instars to minimize feeding damage. For best results, begin applications when threshold levels of moths, eggs or larvae occur. Consult the Cooperative Extension Service, or other qualified professional authorities, to determine the appropriate threshold and timing for application in your area.

Application Directions

Applications must be in a manner that assures uniform and thorough coverage as Zylo insecticide must be ingested by insect larvae to be fully effective. Higher water volume and increased spray pressure generally provide better coverage.

Spray Drift Management

Adhere to the following buffer zones when applying this product near aquatic habitats (such as lakes, reservoirs, rivers, permanent streams, marshes, or natural ponds; estuaries and commercial fish farm ponds):

Application Method	Buffer Zone (feet)
ground boom	25
overhead chemigation	25
airblast	25
aerial	150

Wind: Only apply this product if the wind direction favors on-target deposition. Do not apply when the wind speed exceeds 10 mph.

Temperature Inversions: Do not make ground or aerial applications during a temperature inversion. Temperature inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

Droplet Size: Use only medium or coarser spray nozzles (for ground and non-ULV aerial application) according to ASABE (S572.1) definition for standard nozzles. In conditions of low humidity and high temperatures, use a coarser droplet size except where indicated for specific crops.

Ground Application

To avoid drift and achieve maximum performance of this product, make ground applications when the wind speed favors on-target product depositions (3 to 10 mph). Wind speed must be measured adjacent to the application site on the upwind side immediately prior to application. Do not apply when wind speed exceeds 10 mph. For groundboom applications, apply using a nozzle height of no more than 4 feet above the ground or crop canopy. Shut off the sprayer when turning at row ends. Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind directions are toward the aquatic area.

Airblast Sprayer: When using an airblast sprayer, coverage is also improved by operation of the sprayer at ground speeds that assure that the air volume within the tree canopy is completely replaced by the output from the airblast sprayer. Making applications in an alternate row middle pattern may result in less than satisfactory coverage and poor performance in conditions of high pest infestation levels, extremely large trees and/or dense foliage. For airblast applications, turn off outward pointing nozzles at row ends and when spraying the outer two rows. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy.

Chemigation Application

Zylo insecticide may be applied to cranberries and ornamentals through sprinkler irrigation equipment. Do not apply this product by chemigation unless specified in crop-specific directions in this label or supplemental labeling.

General Directions for Chemigation: Apply through a properly calibrated chemigation system that has the appropriate back flow prevention devices. See the Mixing section of the product label for specific mixing and dilution instructions. Apply Zylo insecticide in dedicated chemigation cycles only, not as a part of a regular irrigation cycle. Do not exceed 900 gallons of water per acre application volume using just enough water to thoroughly wet the plants but not the soil. Use minimum volume for flushout to avoid diluting or rinsing off product. Washout time should not exceed six (6) minutes. Set sprinkler heads in a spacing not exceeding 50 feet by 60 feet and adjusted to provide 100% overlap.

Apply Zylo insecticide only through solid-set sprinkler systems designed specifically for chemigation. Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label prescribed safety devices for public water systems are in place. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

- Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
- Chemigation systems connected to public water systems must contain a functional reduced-pressure zone (RPZ), back flow preventer or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow.

- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must contain a functional, normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems not connected to a public water supply must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located in the irrigation pipeline to prevent water source contamination from back flow.
- Systems must use a positive displacement, metering injection pump (e.g., diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Do not apply when wind speed favors drift beyond the area intended for treatment.
- If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Aerial Application

Mount the spray boom on the aircraft so as to minimize drift caused by wing tip or rotor vortices. Use the minimum practical boom length and do not exceed 75% of the wing span or 80% of the rotor diameter. Flight speed and nozzle orientation must be considered in determining droplet size. Spray must be released at the lowest height consistent with pest control and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety. When applications are made with a crosswind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.

Rainfastness

As soon as dry. However, efficacy or residual will be reduced with exposure to rainfall or overhead irrigation.

Spray Adjuvants

The addition of agricultural adjuvants to sprays of Zylo insecticide may improve initial spray deposits, redistribution and weatherability. Select adjuvants that are recommended and registered for your specific use pattern and follow their use directions. For best performance when using an adjuvant, use an adjuvant certified by the Chemical Producers and Distributors Association. Always add adjuvants last in the mixing process.

Insecticide Resistance Management

Zylo insecticide is a Group 18 insecticide. Insect/mite biotypes with acquired resistance to Group 18 may eventually dominate the insect/mite population if Group 18 insecticides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of this product or other Group 18 insecticides.

To delay development of insecticide resistance, the following practices are recommended:

- Avoid consecutive use of insecticides on succeeding generations with the same mode of action (same insecticide group) on the same insect species.
- Consider tank mixtures or premix products containing insecticides with different modes of action (different insecticide groups) provided the products are registered for the intended use.
- Plan a comprehensive IPM program.
- Monitor treated insect populations in the field for loss of effectiveness.
- Do not treat seedling plants grown for transplant in greenhouses, shade houses, or field plots.
- Contact your local extension specialist, certified crop advisor, and/or manufacturer for insecticide resistance *management and/or IPM recommendations for the specific site and resistant pest problems.*

Endangered Species

The following applies to use of this product in Michigan (Allegan, Monroe, Montcalm, Muskegon, Newaygo, or Oceana counties) or Wisconsin (Adams, Burnett, Chippewa, Clark, Door, Eau Claire, Green Lake, Jackson, Juneau, Marquette, Monroe, Polk, Portage, Waupaca, Waushara, or Wood counties). This product may have effects on endangered species. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the county in which you are applying the product. To obtain Bulletins, no more than six months before using this product, consult http://www.epa.gov/espp/ or call 1-844-447-3813. You must use the Bulletin valid for the month in which you will apply the product.

Rotational Crop Restrictions

Following the final application of Zylo insecticide at labeled rates for registered crop uses, the following rotational crops may be planted at intervals defined below.

Crop	Re-Planting Interval
Registered crop uses	no restrictions
All other crops grown for food or feed	7 days

Note: Always refer to rotational restrictions and precautions of the most restrictive rotational guidelines when Zylo insecticide is used in a tank mix.

Use Instructions

Bushberries (Subgroup 13-07B)[1], Aronia Berry, Buffalo Currant, Chilean Guava, European Barberry, Highbush Cranberry, Honeysuckle, Jostaberry, Juneberry, Lingonberry, Native Currant, Salal, Sea Buckthorn, and Cultivars and/or Hybrids of Each

(Not registered for use in New York)

[1]Bushberries (subgroup 13-07B) including black currant, elderberry, gooseberry, highbush blueberry, huckleberry, lowbush blueberry, red currant.

Ground Application: Apply in a minimum of 30 gallons per acre (gpa) by conventional ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
cherry fruitworm cranberry fruitworm	10 – 16 fl oz/A (0.16-0.25 lb ai/A	Apply at initiation of egg laying [approximately 400 Day Degrees (DD) base 50°F] following biofix[1]. Make a second application at 100% petal fall (usually 7 to 14 days following the first application). An additional application (third) no sooner than 7 days following the second application may be required under high pressure or sustained moth flight.	• Do not apply more than 16 fl. oz. per acre per application or more than a total of 48 fl oz (0.75 lb ai) per acre per year. • Do not make more than 3 applications per year. • **Minimum Re-treatment Interval:** 7 days • **PHI:** 7 days. • See Rotational Crop Restrictions.
European grapevine moth light brown apple moth obliquebanded leafroller		**Spring (overwintering) generation:** Make one or two applications at bloom to petal fall to small larvae when threshold levels occur. **Summer generation:** Begin applications at peak moth flight (200 to 300 DD base 43°F) following biofix. An additional application (third) no sooner than 7 days following the second application may be required under high pressure or sustained moth flight.	
redbanded leafroller variegated leafroller		For control of other leafrollers, apply at early egg hatch for each generation. Make the first application before webbing and sheltering begins. Make a second application to ensure complete coverage of rapidly expanding fruits or foliage.	
spanworm		Apply when first signs of feeding damage appear or when infestations reach threshold levels as defined by cooperative extension service or other qualified professional authorities	
green fruitworm		Apply when larvae are first detected in the clusters or when infestations reach threshold levels as defined by cooperative extension service or other qualified professional authorities.	
armyworm cutworm	8 – 16 fl oz/A (0.12–0.25 lb ai/A)	Apply when first signs of feeding damage appear or when infestations reach threshold levels as defined by cooperative extension service or other qualified professional authorities.	
gypsy moth	4 – 8 fl oz/A (0.06–0.12 lb ai/A)	Apply to early instars (1st, 2nd, or 3rd) at first signs of infestation.	

[1]Biofix is defined as first sustained adult catch in pheromone traps, typically five moths in three traps within a 7-day period. Consult state extension specialists or other qualified authorities for specific information regarding number, placement and management of pheromone traps.

Caneberries (Subgroup 13-07A)[1]

(Not registered for use in New York)

[1]Caneberries (subgroup 13-07A) including bababerry, bingleberry, blackberry, blackcap, black raspberry, black satin berry, boysenberry, caneberry, Cherokee blackberry, chesterberry, Cheyenne blackberry, coryberry, darrowberry, dewberry, dirksen thornless berry, framboise, frambueso, Himalayaberry, himbeere, hullberry, keriberry, lavacaberry, loganberry, lowberry, lucretiaberry, mammoth blackberry, marionberry, mayberry, nectarberry, olallieberry, Oregon evergreen berry, phenomenalberry, rangerberry, ravenberry, red raspberry, rossberry, Shawnee blackberry, thimbleberry, tulaeen, yellow raspberry, youngberry, cultivars, varieties, and/or hybrids of these.

Ground Application: Apply in a minimum of 30 gallons per acre by conventional ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gallons per acre. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
cherry fruitworm cranberry fruitworm	10 – 16 fl oz/A (0.16-0.25 lbs ai/A)	Apply at initiation of egg laying [approximately 400 Day Degrees (DD) base 50°F] following biofix[1]. Make a second application at 100% petal fall (usually 7 to 14 days following the first application). An additional application (third) no sooner than 7 days following the second application may be required under high pressure or sustained moth flight.	• Do not apply more than 16 fl oz per acre per application or more than a total of 48 fl oz (0.75 lb ai)per acre per year . Do not make more than 3 applications per year. • **Minimum Re-treatment Interval:** 7 days • **PHI:** 3 days. • See Rotational Crop Restrictions.
light brown apple moth obliquebanded leafroller		**Spring (overwintering) generation:** Make one or two applications at bloom to petal fall to small larvae when threshold levels occur. **Summer generation:** Begin applications at peak moth flight (200 to 300 DD base 43°F) following biofix. An additional application (third) no sooner than 7 days following the second application may be required under high pressure or sustained moth flight.	
redbanded leafroller variegated leafroller		For control of other leafrollers, apply at early egg hatch for each generation. Make the first application before webbing and sheltering begins. Make a second application to ensure complete coverage of rapidly expanding fruits or foliage.	

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
spanworm	10 – 16 fl oz/A (0.16-0.25 lbs ai/A)	Apply when first signs of feeding damage appear or when infestations reach threshold levels as defined by cooperative extension service or other qualified professional authorities	• Do not apply more than 16 fl oz per acre per application or more than a total of 48 fl oz (0.75 lb ai) per acre per year • Do not make more than 3 applications per year. • **Minimum Re-treatment Interval:** 7 days • **PHI:** 3 days. • See Rotational Crop Restrictions.
green fruitworm		Apply when larvae are first detected in the clusters or when infestations reach threshold levels as defined by cooperative extension service or other qualified professional authorities.	
armyworm cutworm	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A)	Apply when first signs of feeding damage appear or when infestations reach threshold levels as defined by cooperative extension service or other qualified professional authorities.	
gypsy moth	4 – 8 fl oz/A (0.06 – 0.12 lbs ai/A	Apply to early instars (1st, 2nd, or 3rd) at first signs of infestation.	

[1]Biofix is defined as first sustained adult catch in pheromone traps, typically five moths in three traps within a 7-day period. Consult state extension specialists or other qualified authorities for specific information regarding number, placement and management of pheromone traps.

Cilantro Leaves, Brassica (Cole) Leafy Vegetables (Crop Group 5)[1], Leafy Vegetables (Crop Group 4)[2], Leaves of Root and Tuber Vegetables (Crop Group 2)[3], and Turnip Greens

(Not registered for use in New York)

[1]Brassica (cole) leafy vegetables (crop group 5) including broccoli, broccoli raab, Brussels sprouts, cabbage, cauliflower, cavalo broccoli, Chinese broccoli, Chinese cabbage (bok choy, napa), Chinese mustard cabbage (gai choy), collards, kale, kohlrabi, mizuna, mustard greens, mustard spinach, rape greens.

[2]Leafy vegetables (except Brassica) (crop group 4) including amaranth, arugula, cardoon, celery, celtuce, chervil, Chinese celery, corn salad, dandelion, dock, edible-leaved chrysanthemum, endive (escarole), florence fennel, garden cress, garden purslane, garland chrysanthemum, lettuce (head, leaf), New Zealand spinach, orach, parsley, radicchio, rhubarb, spinach, Swiss chard, upland cress, vine spinach, winter purslane.

[3]Leaves of root and tuber vegetables (crop group 2) including bitter cassava, black salsify, carrot, celeriac, chicory, dasheen, edible burdock, garden beet, parsnip, oriental radish, radish, rutabaga, sugarbeet, sweet cassava, sweet potato, tanier, true yam, turnip, and turnip-rooted chervil.

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
beet armyworm cabbage looper cutworms (suppression only) fall armyworm garden webworm *imported* cabbageworm southern armyworm true armyworm yellowstriped armyworm	4 – 8 fl oz/A (0.06–0.12 lbs ai/A)	For early season applications only to young crops and small plants. Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.	• Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 1 day. • See Rotational Crop Restrictions.
beet armyworm cabbage looper cabbage webworm cross-striped cabbageworm cutworms (suppression only) fall armyworm garden webworm imported cabbageworm southern armyworm true armyworm yellowstriped armyworm	8 – 10 fl oz/A (0.12–0.16 lbs ai/A	For mid- to late-season applications, heavier infestations, and under conditions in which thorough coverage is more difficult. For heavy infestations, continuous moth flights, and/or egg masses and larvae in all stages of development, a 10- to 14- day re-treatment interval is required to protect new growth until moth flights and/or hits subside.	
diamondback moth (suppression only)	12 – 16 fl oz/A (0.19–0.25 lbs ai/A)	Infestations and crop damage are reduced when applied at initiation of egg laying.	

Citrus Fruits (Crop Group 10-10)[1]
(Not registered for use in New York)

[1]Citrus fruits (crop group 10-10) including Australian desert lime, Australian finger lime, Australian round lime, brown river finger lime, calamondin, citron, citrus hybrids, grapefruit, Japanese summer grapefruit, kumquat, lemon, lime, Mediterranean mandarin, mount white lime, New Guinea wild lime, pummelo, russell river lime, satsuma mandarin, sour orange, sweet lime, sweet orange, tachibana orange, Tahiti lime, tangelo, tangerine (Mandarin), tangor, trifoliate orange, uniq fruit, cultivars, varieties and/or hybrids of these.

Ground Application: Apply a minimum of 50 gallons per acre by conventional ground equipment to trellised trees or trees 10 feet tall or less. For trees more than 10 feet tall, use a minimum of 100 gallons per acre. For low volume applications, apply a minimum of 20 gallons per acre by ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Optimum results are achieved when higher spray volumes are used. Calibrate equipment to the desired spray volume. When using a new application method or product for the first time, treat a small area before applying to larger areas.

Resistance Management: To reduce the potential for resistance development in target pest species, do not make more than 3 consecutive applications of Zylo insecticide. If additional treatments are required after two consecutive applications, rotate to another class of effective insecticide of alternate modes of action for at least two applications and utilize Integrated Pest Management practices such as routine monitoring, treatment thresholds to time applications, and cultural and biological controls whenever possible. Consult your extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
citrus leafminer citrus peelminer cutworms leafrollers orange dog worm	8 – 16 fl oz/A (0.12–0.25 lbs ai/A)	Apply at the first observation of the pests on the flushing leaves. Reapply no sooner than 14-day intervals.	• Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 1 day.

Corn (Field, Sweet, Seed)
(Not registered for use in New York)

Specific Use Directions-Field Corn:

Ground Application: Apply in a minimum of 5 gpa by conventional ground equipment to young crop or small plants. Higher carrier volumes may be required to provide thorough coverage to larger, more mature crop. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 5 gpa. Use sufficient carrier volume to provide thorough, uniform coverage.

Specific Use Directions-Sweet Corn:

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa after initiation of tasseling. Calibrate equipment and spray volume to assure uniform coverage of infested parts of the crop.

Aerial Application: Apply in a minimum of 10 gpa.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
European corn borer southwestern corn borer sugarcane borer	4 – 16 fl oz/A (0.06 – 0.25 lbs ai/A)	Apply at first sign of egg hatch or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities. Direct application at the whorl for early season (first generation) infestations. Apply as broadcast or multinozzle over the row application to mid- and late season infestations.	• Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI-Field Corn:** 21 days. • **PHI-Sweet Corn:** 3 days of harvest for ears and/or green chop (forage); and 21 days of harvest for dry fodder.
true armyworm western bean cutworm	4 – 16 fl oz/A (0.06 – 0.25 lbs ai/A)	Apply at first sign of egg hatch (field corn), feeding damage (sweet corn), or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities. Under heavy infestations, continuous moth flights, or rapid crop growth and development, reapply at 5- to 10-day re-treatment interval.	• See Rotational Crop Restrictions.

Cotton

(Not registered for use in New York)

Ground Application: *Make applications by conventional ground sprayers which are calibrated to deliver a* minimum of 5 gpa.

Aerial Application: Apply in a minimum of 3 gpa. Use a higher carrier volume or heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
beet armyworm cabbage looper cotton leafworm cotton leaf perforator fall armyworm[1] saltmarsh caterpillar southern armyworm soybean looper true armyworm yellowstriped armyworm	4 – 10 fl oz/A (0.06 - 0.16 lbs ai/A)	Apply at egg hatch or when first signs of feeding occur. Use a higher rate for heavier infestations and under conditions in which thorough coverage is more difficult (most fall armyworm). Under heavy infestations, continuous moth flights and/or egg masses and larvae in all stages of development, a 10- to 14- day re-treatment interval is required to protect new growth until moth flights and/or hits subside.	• Do not apply more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 14 days.

[1]Suppression only. Use a higher rate in the rate range and ensure thorough coverage. Tank mixing Zylo insecticide with other products registered for fall armyworm control in cotton (e.g., pyrethroids, or others) has been shown to improve control. Consult your extension service specialist, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Cranberry

(Not registered for use in New York)

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa.

Chemigation Application: Zylo insecticide may be applied through sprinkler irrigation systems to control listed pests. Use specified broadcast application rates. See Chemigation Application section.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
blackheaded fireworm gypsy moth *sparganothis* fruitworm spanworms spotted fireworm	10 – 16 fl oz/A (0.16 – 0.25 lbs ai/A)	**Spring (overwintering) generation:** Make 1 to 2 applications during the flower bud development period depending upon infestation level. **Summer generation:** Make the first application during the period of peak egg lay to early egg hatch. Reapply 10 to 18 days later. A higher rate in the rate range and additional applications at 10- to 18-day intervals may be required for heavy infestations, sustained moth flight, situations in which it is difficult to achieve thorough coverage, and for quicker knockdown of larvae. For control of light to moderate infestations, begin applications before egg hatch of each generation and before the larvae penetrate the fruit. The product provides 10 to 18 days of protection depending upon application rate and how rapidly fruit is expanding.	• Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 14 days.

Cucurbit Vegetables (Crop Group 9)[1]

(Not registered for use in New York)

[1]Cucurbit vegetables (crop group 9) including balsam apple, balsam pear, bitter melon, chayote (fruit), Chinese cucumber, Chinese waxgourd (Chinese preserving melon), citron melon, cucumber, edible gourd (including Chinese okra, cucuzza, hechima, hyotan), gherkin, muskmelon (including cantaloupe, casaba, crenshaw melon, golden pershaw melon, honey balls, honeydew melon, mango melon, persian melon, pineapple melon, santa claus melon, snake melon, true cantaloupe), pumpkin, summer squash (including crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini), winter squash (including acorn squash, butternut squash, calabaza, hubbard squash, spaghetti squash), watermelon.

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
beet armyworm cabbage looper melon worm pickle worm rind worm southern armyworm true armyworm yellowstriped armyworm	4 – 10 fl oz/A (0.06 – 0.16 lbs ai/A)	Apply at first sign of infestation, targeting eggs and small larvae, or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.	• Do not apply more than a total of 64 fl oz (1 lb ai) per acre per year. • Do not make more than 4 applications per acre per year. • **Minimum Re-treatment Interval:** 7 days • **PHI:** 3 days. • See Rotational Crop Restrictions.

Dates

(Not registered for use in New York)

Ground Application: Apply a minimum of 100 gallons per acre. Equipment and spray volume should be calibrated to assure uniform coverage of infested parts of the crop.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
carob moth	10 – 20 fl oz/A (0.16 – 0.31 lbs ai/A)	For control of light to moderate infestations, begin applications before egg hatch of each generation and before the larvae penetrate the fruit. Once applied, the product provides 10 to 18 days of protection depending upon application rate and how rapidly fruit is expanding. Consult local spray timing advisories or follow biofix dates based on pheromone trap catches to time sprays appropriately. For continuous moth flight and egg laying, use the highest labeled rate. Maintain coverage on the fruit surface with 10- to 18-day retreatment intervals. Alternate or intersperse with other insecticides with different modes of action targeted for the same pest so long as the re-treatment interval does not exceed the period of effectiveness of the products being alternated and Zylo insecticide is applied before larvae penetrate the fruit.	• Do not apply more than 20 fl oz per acre per application or a total of 64 fl oz (1 lb ai) per acre per year. • Do not make more than 3 applications per acre per year. • **Minimum Re-treatment Interval:** 10 days • **PHI:** 7 days.

Fruiting Vegetables (Crop Group 8-10)[1]

(Not registered for use in New York)

[1]Fruiting vegetables (crop group 8-10) including African eggplant, bell pepper, bush tomato, cocona, currant tomato, eggplant, garden huckleberry, goji berry, groundcherry, hot pepper, martynia, naranjilla, nonbell pepper, okra, pea eggplant, pepino, pimento pepper, roselle, scarlet eggplant, sunberry, sweet pepper, tomatillo, tomato, tree tomato, cultivars, varieties and/or hybrids of these.

Ground Application: Apply in a minimum of 10 gallons per acre by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gallons per acre to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gallons per acre.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
beet armyworm cabbage looper European corn borer fall armyworm southern armyworm tomato hornworm true armyworm yellowstriped armyworm western yellowstriped armyworm	4 – 8 fl oz/A (0.06 – 0.12 lbs ai/A)	For early season applications only to young crops and small plants. Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.	• Do not apply more than 16 fl oz per acre per application or a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 1 day. • See Rotational Crop Restrictions.
	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A	For mid- to late-season applications, heavier infestations, and under conditions in which thorough coverage is more difficult. For heavy infestations, continuous moth flights, and/or egg masses and larvae in all stages of development, a 7- to 14-day re-treatment interval is required to protect new growth until moth flights and/or larval infestations subside.	
tomato fruitworm (suppression only)	10 – 16 fl oz/A (0.16 – 0.25 lbs ai/A)	Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities. May provide partial control when infestations reach high levels.	
tomato pinworm (suppression only)	10 – 16 fl oz/A (0.16 – 0.25 lbs ai/A)	Leafmining and infestations of leafmining phase are reduced when applied at initiation of egg laying.	

Globe Artichoke

(Not registered for use in New York)

Ground Application: Apply in a minimum of 75 gpa of water using calibrated ground application equipment that provides thorough coverage.

Aerial Application: Apply in a minimum of 10 gpa of water. Use higher water volumes for heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworm plume moth	4 – 16 fl oz/A (0.06 – 0.25 lbs ai/A)	Apply at egg hatch or when first signs of feeding occur. Use a higher rate for heavier infestations and under conditions in which thorough coverage is more difficult. Under conditions of heavy infestations, continuous moth flights and/or egg masses and larvae in all stages of development, reapply Zylo insecticide or another effective product at a minimum application interval of 7 days to protect new growth until moth flights subside.	• Do not apply more than a total of 64 fl oz (1 lb ai) per acre per year. • Do not make more than 4 applications per year. • **PHI:** 4 days.

Grape

(Not registered for use in New York)

Ground Application: Apply in a minimum of 40 gpa by conventional airblast or over the row sprayer. If using other type of sprayer, apply in sufficient carrier volume to ensure thorough, uniform cover of the crop. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 20 gpa. This method should not be used if the density of the foliage prohibits thorough, uniform coverage of the entire vine canopy.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
grape berry moth	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A)	For internal feeding lepidoptera larvae, apply at initiation of egg hatch for each generation. Reapply within 10 to 18 days to ensure complete coverage of rapidly expanding fruits or foliage.	• Do not apply more than 16 fl oz per acre per application or more than a total of 48 fl oz (0.75 lb ai) per acre per year. • **PHI:** 30 days.
European grapevine moth grape leaf folder light brown apple moth omnivorous leafroller obliquebanded leafroller orange tortrix redbanded leafroller		**Spring generation:** Apply at first sign of larval infestation or to small larvae when threshold levels occur. **Summer generation:** For each generation, apply at first egg hatch. Reapply at 10- to 14-day intervals under high pressure or sustained moth flight.	

Grass Forage, Fodder, and Hay (Crop Group 17)
(Not registered for use in New York)

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 5 gpa. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworms	4 – 8 fl oz/A (0.06 - 0.12 lbs ai/A	Begin applications when first signs of feeding damage appear or when threshold levels of feeding damage occur. Use a higher rate for heavier infestations and under conditions in which thorough coverage is more difficult.	• Do not apply more than a total of 32 fl oz (0.5 lb ai) per acre per year. • Do not make more than 1 application cutting. • **PHI-Hay:** 7 days. • **PHI-Forage:** 0 days. Livestock can enter and graze on treated area immediately after application. • See Rotational Crop Restrictions.

Green Onion (Subgroup 3-07B)[1], except chive (fresh leaves)
(Not registered for use in New York)

[1]Green onion (subgroup 3-07B) including beltsville bunching onion, Chinese chive (fresh leaves), elegans hosta, fresh onion, fritillaria leaves, green onion, kurrat, lady's leek, leek, macrostem onion, shallot (fresh leaves), tree onion (tops), wild leek.

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
lepidopteran larvae including: armyworms European corn borer loopers	4 – 8 fl oz/A (0.06 – 0.12 lbs ai/A	For early season applications only to young crops and small plants. Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.	• Do not apply more than 12 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • Do not make more than 6 applications per acre per year. • **PHI**: 1 day. • See Rotational Crop Restrictions.
	8 – 12 fl oz/A (0.12 – 0.19 lb ai/A	For mid- to late-season applications, heavier infestations, and under conditions in which thorough coverage is more difficult. For heavy infestations, continuous moth flights, and/or egg masses and larvae in all stages of development, reapplication can be made at a minimum 10-day re-treatment interval to protect new growth until moth	

		flights and/or hits subside.	

Herbs (Fresh and Dried) (Subgroup 19A)[1]

(Not registered for use in New York)

[1]Herbs (fresh and dried) (subgroup 19A) including angelica, annual marjoram, balm, basil, borage, burnet, camomile, catnip, chervil (dried), chive, coriander (leaf), costmary, culantro (leaf), curry (leaf), dillweed, horehound, hyssop, lavender, lemongrass, lovage (leaf), marigold, marjoram, nasturtium, oregano, parsley (dried), pennyroyal, pot marjoram, rosemary, rue, sage, summer savory, sweet bay, sweet marjoram, tansy, tarragon, thyme, wild marjoram, wintergreen, winter savory, woodruff, wormwood.

Ground Application: Apply in a minimum of 10 gallons per acre by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gallons per acre to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gallons per acre.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
beet armyworm cabbage looper cutworms (suppression only) fall armyworm garden webworm imported cabbageworm southern armyworm true armyworm yellowstriped armyworm	4 – 8 fl oz/A (0.06 – 0.12 lbs ai/A	For early season applications only to young crops and small plants. Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.	• Do not apply more than 16 fl oz per acre per application or a total of 64 fl oz (1 lb ai) per acre per year. • **Minimum Re-treatment Interval:** 10 days • See Rotational Crop Restrictions. . **PHI:** 1 day.
beet armyworm cabbage looper cabbage webworm cross-striped cabbageworm cutworms (suppression only) fall armyworm garden webworm imported cabbageworm southern armyworm true armyworm yellowstriped armyworm	8 – 10 fl oz/A (0.12 – 0.16 lbs ai/A)	For mid- to late-season applications, heavier infestations, and under conditions in which thorough coverage is more difficult. For heavy infestations, continuous moth flights, and/or egg masses and larvae in all stages of development, a 10- to 14- day re-treatment interval is required to protect new growth until moth flights and/or hits subside.	
diamondback moth (suppression only)	12 – 16 fl oz/A (0.19 – 0.25 lbs ai/A)	Infestations and crop damage are reduced when applied at initiation of egg laying.	

Legume Vegetables (Succulent or Dried) (Crop Group 6)[1] and Foliage of Legume Vegetables (Except Soybean) (Subgroup 7A)[2]

(Not registered for use in New York)

[1]Legume vegetables (succulent or dried) (crop group 6) including asparagus bean, blackeyed pea, Cajanus spp. (pigeon pea), Chinese longbean, Cicer arietinum (chick peas, garbanzo beans), cowpea, green lima bean, jackbean, Lens spp. (lentils), Lupinus spp. (grain lupine, sweet lupine, white lupine, white sweet lupine), moth bean, Phaseolus spp. (kidney beans, lima beans, mung beans, navy beans, pinto beans, snap beans, waxbeans), Pisum spp. (dwarf pea, edible-pod pea, English pea, field pea, garden pea, green pea), runner bean, snap bean, snow pea, soybean (immature seed), southern pea, succulent broad bean, sugar snap pea, sword bean, Vicia faba (broad beans, fava beans); Vigna spp. (asparagus beans, blackeyed pea, cowpeas), wax bean, yardlong bean.

Foliage of legume vegetables (except soybean) (subgroup 7A) including any cultivar of bean and field pea (except soybean).

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

Resistance Management: To reduce the potential for resistance development in target pest species, do not make more than two consecutive applications of Zylo insecticide. If additional treatments are required after two consecutive applications of Zylo insecticide, rotate to another class of effective insecticides for at least one application and utilize Integrated Pest Management practices such as routine monitoring, treatment thresholds to time applications, and cultural and biological controls whenever possible. Consult your extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
alfalfa looper beet armyworm cabbage looper European corn borer fall armyworm southern armyworm tomato hornworm true armyworm yellowstriped armyworm western yellowstriped armyworm	4 – 8 fl oz/A (0.06 – 0.12 lbs ai/A	For early season applications only to young crops and small plants. Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.	• Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • Do not make more than 4 applications per acre per year. • **Minimum Re-treatment Interval:** 7 days • Do not use adjuvants in the tank mix when applying this product to dry peas and beans. • Do not apply to dry peas by aerial ULV. • See Rotational Crop Restrictions. • **PHI:** 7 days.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
alfalfa looper beet armyworm cabbage looper European corn borer fall armyworm southern armyworm tomato hornworm true armyworm yellowstriped armyworm western yellowstriped armyworm	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A)	For mid- to late-season applications, heavier infestations, and under conditions in which thorough coverage is more difficult. For heavy infestations, continuous moth flights, and/or egg masses and larvae in all stages of development, a 7- to 14-day re-treatment interval is required to protect new growth until moth flights and/or larval infestations subside.	• Do not use adjuvants in the tank mix when applying this product to dry peas and beans. • Do not apply to dry peas by aerial ULV. • Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • Do not make more than 4 applications per acre per year. • **Minimum Re-treatment Interval:** 7 days • **PHI:** 7 days. • See Rotational Crop Restrictions.
corn earworm (*Heliocoverpa/ Heliothis*) (suppression only)	10 – 16 fl oz/A (0.16 – 0.25 lbs aiA)	Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities. May provide partial control when infestations reach high levels.	
tomato pinworm (suppression only)		Leafmining and infestations of leafmining phase are reduced when applied at initiation of egg laying.	

Low Growing Berry (Except Cranberry) (Crop Group 13-07G)[1]

(Not registered for use in New York)

[1]Low growing berry (except cranberry) (crop group 13-07G) including bearberry, bilberry, cloudberry, lingonberry, lowbush blueberry, muntries, partridgeberry, strawberry, cultivars, varieties, and/or hybrids of these.

Ground Application: Apply in a minimum of 10 gallons per acre by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gallons per acre to densely foliated or difficult cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gallons per acre.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworms, including corn earworm (suppression only) cutworms (suppression only)	6 – 12 fl oz/A (0.09 - 0.19 lbs ai/A)	For early season applications to young crops and small plants. Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities. For heavy infestations, continuous moth flights and/or egg masses and larvae in all stages of development, a 10-to 14 day retreatment interval is required to protect new growth until moth flights and/or hits subside.	• Do not apply more than a total of 12 fl oz (0.19 lb ai) per application or a total of 64 fl oz (1 lb ai) acre per year. • **PHI:** 3 days. Minimum retreatment interval: 10 days. • See Rotational Crop Restrictions.

Nongrass Forage, Fodder, Straw and Hay (Crop Group 18)[1]

(Not registered for use in New York)

[1]Nongrass forage, fodder, straw and hay (crop group 18) including alfalfa, clover, crown vetch, kudzu, lespedeza, lupin, milk vetch, sainfoin, trefoil, velvet bean, vetch.

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 5 gpa. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworms, including beet fall southern striped true western yellowstriped alfalfa caterpillar alfalfa looper webworms	4 – 8 fl oz/A (0.06 - 0.12 lbs ai/A)	Begin applications when first signs of feeding damage appear or when threshold levels of feeding damage occur. Use a higher rate for heavier infestations and under conditions in which thorough coverage is more difficult.	• Do not apply more than a total of 32 fl oz (0.5 lb ai) per acre per year. • Do not make more than 1 application per cutting. • **PHI-Hay:** 7 days. • **PHI-Forage:** 0 days. • Livestock can enter and graze on treated area immediately after application. • See Rotational Crop Restrictions.

Ornamentals

(Not registered for use in New York)

Zylo insecticide controls the listed pests on trees; shrubs; foliage plants and flowers grown in commercial nurseries and greenhouses, in Christmas tree farms, in outdoor landscape areas such as parks, recreational areas, institutional grounds, residential property, etc., and in interior plantscapes. When applied as directed, Zylo insecticide has shown excellent selectivity on a wide range of ornamental plants. It is impossible, however, to evaluate this product on all ornamentals or under all possible growing conditions. The user should exercise reasonable judgment and caution with this product; until familiar with results under user growing conditions, treat a limited number of plants.

Ground Application: Apply in a minimum of 50 gpa by conventional ground equipment or hydraulic sprayers. Apply in a minimum of 10 gpa by mist blowers or air blast sprayers. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Hand Sprayers: Apply in enough water to thoroughly spray plant foliage until runoff.

Zylo insecticide (fl oz/acre)	Active Ingredient (lb ai/acre)	Equivalent Zylo insecticide in 1 Gallon of Water (Teaspoon)
4 fl oz/A	0.06 lbs ai/A	¼ teaspoon
8 fl oz/A	0.12 lbs ai/A	½ teaspoon
16 fl oz/A	0.25 lbs ai/A	1 teaspoon

Aerial Application: Apply in a minimum of 20 gpa. Zylo insecticide can be aerially applied when conditions warrant. However, this method should not be used if the size of the tree or density of the foliage prohibits thorough, uniform coverage of the entire tree canopy. Do not make aerial applications in immediate proximity of residential, commercial, government, institutional or other structures where people may be present including homes, apartments, offices, churches, schools, and businesses. Aerial applicators should evaluate conditions existing at the time of application and make appropriate adjustments to reduce drift. In urban areas, however, use is limited to directed ground or chemical applications.

Chemigation Application: Zylo insecticide may be applied through sprinkler irrigation systems to control listed pests. Use specified broadcast application rates. See Chemigation Application section.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworm bagworms beet armyworm browntail moth codling moth cutworms eastern tent caterpillar *elm spanworm* eucalyptus caterpillar European grapevine moth fall armyworm fall cankerworm fall webworm Florida fern caterpillar forest tent caterpillar gypsy moth hemlock looper jack pine budworm leafrollers light brown apple moth pine tip moth processionary caterpillar puss caterpillar spruce budworm tussock moth western spruce budworm western tent caterpillar yellowneck caterpillar *zimmerman pine* moth	4 – 16 fl oz/A (0.06 – 0.25 lbs ai/A)	Begin applications when larvae are observed or at the first sign of feeding damage. Repeat applications on a 10- to 14-day interval or as necessary based upon pest reinfestation. Uniform coverage of the foliage is essential to provide maximum protection from defoliation and reduction of egg mass deposition.	• Do not apply more than a total of 32 fl oz (0.5 lb ai) per acre per year. • Do not make more than 4 applications per acre per year. • Allow at least six hours between application completion and onset of precipitation to assure thorough spray drying.

Peanut

(Not registered for use in New York)

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 5 gpa. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworms cabbage looper green clover worm saltmarsh caterpillar soybean loopers velvet bean caterpillar	6 – 10 fl oz/A (0.09 - 0.16 lbs ai/A	Apply when first signs of feeding damage appear or when threshold levels of feeding damage occur.	• Do not apply more than a total of 64 fl oz (1 lb ai) per acre per year. • Do not make more than 3 applications per acre per year. • **Minimum Re-treatment Interval:** 7 days • **PHI:** 7 days. • See Rotational Crop Restrictions.

Pineapple

(For Use only in Hawaii)

Application Rate: Apply as a foliar spray at the rate indicated to control target pests. Heavy infestations may require repeat applications, but follow resistance management guidelines.

Application volume: Apply in spray volume which will provide thorough crop coverage.

Pests and Application Rates:

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
suppression of lepidopterous larvae such as: armyworms banana moth *Batrachedra commosae* *Elaphria nucicolora* fruit borer caterpillar (*Thecla basilides; Strymon basilides*) pineapple caterpillar pink cornworm sugarcane bud moth	4 – 7 fl oz/A (0.06 - 0.10 lbs ai/A	For determining when to treat, scout with enough regularity to monitor the population size of each of the labeled pests. Treat when pests appear, targeting eggs at hatch or small larvae. Consult your extension specialist, certified crop advisor or your state agricultural experiment station for any additional local use recommendations for your area.	• Do not apply more than a total of 28 fl oz (0.44 lb ai) per acre per year • Do not make more than 4 applications per year. • **Minimum Re-treatment Interval:** Do not make applications less than 7 days apart. • **PHI:** 3 days.

Pome Fruits (Crop Group 11-10)[1]

[1]Pome fruit (crop group 11-10) including apple, Asian pear, azarole, crabapple, loquat, mayhaw, medlar, pear, quince, tejocote, cultivars, varieties, and/or hybrids of these.

For best protection, begin applications before egg hatch of each generation. For pests that penetrate fruit apply before the larval hatch and penetrate the fruit. Zylo insecticide may provide 10 to 18 days of protection depending upon application rate and how rapidly fruit and/or leaves are expanding. Most effective crop protection results when an application is made at the initiation of egg hatch. For heavy infestations, continuous moth flight and egg laying, or extended egg hatch, use the maximum specified rates. Maintain coverage on the fruit surface with 10- to 18-day re-treatment intervals.

Zylo insecticide may also be used in a program approach alternated or interspersed with other insecticides. Make sure the re-treatment interval does not exceed the period of effectiveness of the alternate products and Zylo insecticide.

Consult local spray timing advisories or follow biofix dates based upon pheromone trap catches to time sprays appropriately.

Ground Application: Apply by conventional ground sprayers which are calibrated to deliver a minimum of 50 gallons per acre to trellised trees or trees 10 feet tall or less. For trees greater than 10 feet tall, use a minimum of 100 gallons per acre.

Aerial Application: Aerial application is allowed only for the last two applications prior to harvest. Apply in a minimum of 20 gallons per acre. Zylo insecticide can be applied by aerial applications when conditions warrant. However, this method should not be used if the size of the tree or density of the foliage prohibits thorough, uniform coverage of the entire tree canopy.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
codling moth (suppression only) For use against low to moderate infestations in conjunction with alternate control measures such as in established mating disruption blocks.	16 fl oz/A (0.25 lbs ai/A)	For each generation, apply at the initiation of egg lay (usually occurs at 100 to 200 DD, base 50°F, following biofix). Reapply 10 to 18 days later.	• Do not apply more than a total of 64 fl oz (1 lb ai) per acre per year. • Aerial application is allowed **only** for the last two applications prior to harvest. • **PHI:** 14 days.
lesser appleworm oriental fruit moth	12 – 16 fl oz/A (0.19 - 0.25 lbs ai/A)		
obliquebanded leafroller pandemis leafroller	8 – 16 fl oz/A (0.12 - 0.25 lbs ai/A)	**Spring (overwintering) generation:** Make 1 to 2 applications during the pink to petal fall period depending upon infestation level. **Summer generation:** Make the first application during the period of peak egg lay to early egg hatch (usually 200 to 400 DD following biofix). Reapply 10 to 18 days later (usually 500 to 700 DD).	

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
eyespotted bud moth fruittree leafroller light brown apple moth redbanded leafroller variegated leafroller	8 – 16 fl oz/A (0.12 - 0.25 lbs ai/A	For control of surface or foliar feeding leafroller larvae, apply when larvae are feeding.	• Do not apply more than a total of 64 fl oz (1 lb ai) per acre per year. • Aerial application is allowed **only** for the last two applications prior to harvest. • **PHI:** 14 days.
tufted apple bud moth	6 – 10 fl oz/A (0.09 - 0.16 lbs ai/A)	For each generation, apply at 10 to 30% egg hatch.	
spotted tentiform leafminer western tentiform leafminer	8 – 12 fl oz/A (0.12 - 0.19 lbs ai/A)	**First generation:** Apply at pink to petal fall. **Second, third generation:** Apply at early egg hatch for each generation.	
lacanobia fruitworm	12 fl oz/A (0.19 lbs ai/acre)	Apply at egg hatch or at the first sign of larval infestation. Reapply within 10 to 14 days.	

Pomegranate

(Not registered for use in New York)

Ground Application: Apply a minimum of 50 gpa by conventional ground equipment to trellised trees or trees 10 feet tall or less. For trees greater than 10 feet tall, use a minimum of 100 gpa. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 20 gpa. This method should not be used if the size of the tree or density of the foliage prohibits thorough, uniform coverage of the entire tree canopy.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
European grapevine moth filbert worm light brown apple moth navel orangeworm obliquebanded leafroller omnivorous leafroller	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A)	Apply when larvae are feeding. Most effective crop protection results from application made at the initiation of egg hatch. The higher rates in the rate range and additional applications at 10- to 18-day intervals may be required for heavy infestations, sustained moth flight, situations in which it is difficult to achieve thorough coverage, and for quicker knockdown of larvae.	• Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 7 days.
redhumped caterpillar	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A)	Apply at initiation of egg hatch or at the first sign of larval infestation. Reapply in 10 to 14 days to ensure complete coverage of rapidly expanding fruits or foliage.	

Popcorn

(Not registered for use in New York)

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa after initiation of tasseling. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gallons per acre.

Resistance Management: To reduce the potential for resistance development in target pest species, do not make more than two consecutive applications of Zylo insecticide. If additional treatments are required after two consecutive applications of Zylo insecticide, rotate to another class of effective insecticides for at least one application and utilize Integrated Pest Management practices such as routine monitoring, treatment thresholds to time applications, and cultural and biological controls whenever possible. Consult your extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
European corn borer southwestern corn borer	4 – 8 fl oa/A (0.06 – 0.12 lbs ai/A)	Apply at first sign of egg hatch or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities. Direct application at the whorl for early season (first generation) infestations. Apply as broadcast or multinozzle over the row application to mid- and late season infestations.	• Do not apply more than 8 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • Do not apply to popcorn by aerial ULV. • **PHI-Grain & Stover:** 21 days. • **PHI-Popcorn Forage:** 0 days. • See Rotational Crop Restrictions below.
true armyworm western bean cutworm	4 – 8 fl oz/A (0.06 – 0.12 lbs ai/A)	Apply at first sign of egg hatch (field corn), feeding damage (sweet corn), or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities. Under heavy infestations, continuous moth flights, or rapid crop growth and development, reapply at 5- to 10-day re-treatment interval.	

Root Vegetables (Subgroups 1A, 1B)[1]

(Not registered for use in New York)

[1]Root vegetables (subgroups 1A, 1B) including black salsify, carrot, celeriac, chicory, edible burdock, garden beet, ginseng, horseradish, parsnip, oriental radish, radish, rutabaga, salsify, skirret, Spanish salsify, sugarbeet, turnip, turnip-rooted chervil, and turnip-rooted parsley.

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: *Apply in a minimum of 10 gpa. Use a higher carrier volume for heavy infestations and in* situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworms cabbageworms cutworm (suppression only) loopers saltmarsh caterpillar webworms	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A)	Apply at egg hatch or when first signs of feeding occur. Use a higher rate for heavier infestations and under conditions in which thorough coverage is more difficult. Under heavy infestations, continuous moth flights and/or egg masses and larvae in all stages of development, reapply to protect new growth until moth flights and/or hits subside.	• Do not apply more than a total of 64 fl oz (1 lb ai) per acre per year for all crops except radish. • Do not apply more than a total of 32 fl oz (0.5 lb ai) per acre per year for radish. • **Minimum Re-treatment Interval:** 14 days • **PHI-Sugar Beet:** 7 days. • **PHI-All Other Root Vegetables:** 1 days. • See Rotational Crop Restrictions.

Small Fruit Vine Climbing (Except Fuzzy Kiwifruit and Grape) (Crop Group 13- 07F)[1]

(Not registered for use in New York)

[1]Small fruit vine climbing (except fuzzy kiwifruit and grape) (crop group 13-07F) including amur river grape, gooseberry, hardy kiwifruit, maypop, schisandra berry, cultivars, varieties, and/or hybrids of these.

Ground Application: Apply in a minimum of 40 gallons per acre by conventional airblast or over the row sprayer. If using other type of sprayer, apply in sufficient carrier volume to ensure thorough, uniform cover of the crop. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 20 gallons per acre. This method should not be used if the density of the foliage prohibits thorough, uniform coverage of the entire vine canopy.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
grape berry moth	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A)	For internal feeding lepidoptera larvae, apply at initiation of egg hatch for each generation. Reapply within 10 to 18 days to ensure complete coverage of rapidly expanding fruits or foliage.	• Do not apply more than 16 fl oz per acre per application or a total of 48 fl oz (0.75 lb ai) per acre per year. • **PHI:** 30 days
grape leaf folder light brown apple moth omnivorous leafroller obliquebanded leafroller orange tortrix redbanded leafroller		**Spring generation:** Apply at first sign of larval infestation or to small larvae when threshold levels occur. ***Summer generation:*** *For each* generation, apply at first egg hatch. Reapply at 10- to 14-day intervals under high pressure or sustained moth flight.	

Sorghum (Grain and Sweet)

(Not registered for use in New York)

Ground Application: Apply in a minimum of 15 gallons per acre by conventional ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gallons per acre.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
southwestern corn borer sugarcane borer	8 – 10 fl oz/A (0.12 – 0.16 lbs ai/A)	Apply at first sign of egg hatch or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities. Apply as broadcast or multinozzle over the row application to mid- and lateseason infestations.	• Do not apply more than 12 fl oz per acre per application or 48 fl oz (0.75 lb ai) per acre per year. • **PHI-Grain & Stover:** 21 days. • **PHI-Forage & Sweet Sorghum Stalk:** 3 days. • See Rotational Crop Restrictions.

Soybean

(Not registered for use in New York)

Ground Application: Apply in a minimum spray volume of 10 gpa using calibrated ground application equipment that provides thorough coverage.

Aerial Application: Apply in a minimum spray volume of 5 gpa in equipment that has been properly patterned and calibrated for environmental conditions at the site. Use higher water volumes for heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworms green clover worm saltmarsh caterpillar soybean loopers velvet bean caterpillar	4 – 8 fl oz/A (0.06 – 0.12 lbs ai/A)	Begin applications when first signs of feeding damage appear or when threshold levels of feeding damage occur. Use a higher rate for heavier infestations and under conditions in which thorough coverage is difficult to achieve.	• Do not apply more than a total of 64 fl oz (1 lb ai) per acre per year. • Do not make more than 4 applications per year. • **Re-Planting Interval:** A 7-day re-planting interval is required for residues of methoxyfenozide. • **PHI-Hay and Forage:** 7 days • **PHI-Seed Harvest:** 14 days

Spearmint and Peppermint

(Not registered for use in New York)

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 5 gpa. Calibrate aircraft to assure uniform coverage of the target crop.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworms cutworms loopers	10 – 16 fl oz/A (0.16 – 0.25 lbs ai/A)	Scout crops on a regular basis and treat as soon as economic thresholds have been met. Target small larvae and egg masses when possible. Use a higher rate in the rate range for high infestations and when extended residual is needed. Reapply at 14- to 21-day intervals when there are continuing infestations.	• Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. . **PHI:** 14 days.

Stone Fruits (Crop Group 12-12)[1]

(Not registered for use in New York)

[1]Stone fruits (crop group 12-12) including American plum, apricot, beach plum, black cherry, Canada plum, capulin, cherry plum, cherry (sweet, sour), cherry (tart) chickasaw plum, Chinese Jujube, Damson plum, Japanese apricot, Japanese plum, Klamath plum, Nanking cherry, nectarine, peach, plum, plumcot, prune plum, sloe, cultivars, varieties, and/or hybrids of these.

Ground Application: Apply in a minimum of 50 gpa by conventional ground equipment to trellised trees or trees 10 feet tall or less. For trees greater than 10 feet tall, use a minimum of 100 gpa. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 20 gpa. This method should not be used if the size of the tree or density of the foliage prohibits thorough, uniform coverage of the entire tree canopy.

Stone Fruits (Except Sweet and Sour Cherries)

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
codling moth (suppression only) oriental fruit moth	10 – 16 fl oz/A (0.16 – 0.25 lbs ai/A)	For control of light to moderate infestations, begin applications before egg hatch of each generation and before the larvae penetrate the fruit. The product provides 10 to 18 days of protection depending upon application rate and how rapidly fruit is expanding. Consult local spray timing advisories or follow biofix dates based upon pheromone trap catches to time sprays appropriately. For continuous moth flight and egg laying, use the highest labeled rate. Maintain coverage on the fruit surface with 10- to 18- day re-treatment intervals. Alternate or intersperse with other insecticides targeted at the same pest so long as the re-treatment interval does not exceed the period of effectiveness of the products being alternated and Zylo insecticide is applied before larvae penetrate the fruit	• Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 7 days.
peach twig borer	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A)	For each generation, apply at initiation of egg hatch before larvae enter the fruit. Reapply in 10 to 14 days to ensure complete coverage of rapidly expanding fruits or foliage, or under conditions of high infestation or sustained moth flight.	

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
obliquebanded leafroller pandemis leafroller	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A)	**Spring (overwintering) generation:** Make 1 to 2 applications during the pink to petal fall period depending upon infestation level. **Summer generation:** Make the first application during the period of peak egg lay to early egg hatch (usually 200 to 400 DD following biofix). Reapply 10 to 18 days later (usually 500 to 700 DD). A higher rate in the rate range and additional applications at 10- to 18-day intervals may be required for heavy infestations, sustained moth flight, situations in which it is difficult to achieve thorough coverage, and for quicker knockdown of larvae.	• Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 7 days.
European grapevine moth fruittree leafroller light brown apple moth omnivorous leafroller redbanded leafroller threelined leafroller tufted apple budmoth variegated leafroller		For control of surface or foliar feeding leafroller larvae, apply when larvae are feeding. Most effective crop protection results from application made at the initiation of egg hatch. For heavy infestations, continuous moth flights, or extended egg hatch, use maximum specified rates. Maintain coverage with 10- to 18-day re-treatment intervals.	
cherry fruitworm green fruitworm lesser appleworm	10 – 16 fl oz/A (0.16 – 0.25 lbs ai/A)	Apply at initiation of egg hatch or at the first sign of larval infestation. Reapply in 10 to 14 days to ensure complete coverage of rapidly expanding fruits or foliage.	
redhumped caterpillar	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A)		

Cherries (Sweet and Sour)

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
obliquebanded leafroller pandemis leafroller	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A)	**Spring (overwintering) generation:** Make 1 to 2 *applications during the pink to* petal fall period depending upon infestation level. **Summer generation:** Make the first application during the period of peak egg lay to early egg hatch (usually 200 to 400 DD following biofix). Reapply 10 to 18 days later (usually 500 to 700 DD). A higher rate in the rate range and additional applications at 10- to 18-day intervals may be required for heavy infestations, sustained moth flight, situations in which it is difficult to achieve thorough coverage, and for quicker knockdown of larvae.	• Do not apply more than 16 fl oz per acre per *application or more than a* total of 58 fl oz (0.9 lb ai) per acre per year. • **PHI**: 7 days
eyespotted bud moth fruittree leafroller light brown apple moth omnivorous leafroller redbanded leafroller threelined leafroller tufted apple budmoth variegated leafroller		For control of surface or foliar feeding leafroller larvae, apply when larvae are feeding. Most effective crop protection results from application made at the initiation of egg hatch. For heavy infestations, continuous moth flights, or extended egg hatch, use maximum specified rates. Maintain coverage with 10- to 18-day re-treatment intervals.	
cherry fruitworm	10 – 16 fl oz/A (0.16 – 0.25 lbs ai/A)	Apply at initiation of egg hatch or at the first sign of larval infestation. Reapply in 10 to 14 days to ensure complete coverage of rapidly expanding fruits or foliage.	
redhumped caterpillar	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A)		

Tree Nuts (Crop Group 14-12)[1]

(Not registered for use in New York)

[1]Tree nuts (crop group 14-12) including African nut-tree, almond, beech nut, Brazil nut, Brazilian pine, bunya, bur oak, butternut, Cajou nut, candlenut, cashew, chestnut, chinquapin, coconut, coquito nut, dika nut, filbert (hazelnut), ginkgo, Guiana chestnut, heartnut, hickory nut, Japanese horse chestnut, macadamia (bush) nut, mongongo nut, monkey-pot, monkey puzzle nut, Okari nut, Pachira nut, peach palm nut, pecan, pequi, Pili nut, pine nut, pistachio, Sapucaia nut, tropical almond, walnut (black and English), yellowhorn and cultivars, and varieties and/or hybrids of these.

Ground Application: Apply in a minimum of 50 gpa by conventional ground equipment to trees 10 feet tall or less. For trees greater than 10 feet tall, use a minimum of 100 gpa. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa. This method may result in reduced efficacy if the size of the tree or density of the foliage prohibits thorough, uniform coverage of the entire tree canopy.

Almonds

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
peach twig borer	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A)	**Spring (overwintering) generation:** Make 1 to 2 applications during the bloom to petal fall period depending upon infestation level. **Summer generation:** Begin applications at peak moth flight (400 to 450 DD, base 50°F, following biofix). Reapply at 14- to 18-day intervals under high pressure or sustained moth flight. A higher rate in the rate range may be required for extended residual effectiveness, high pest infestation levels, larger trees, or heavy dense foliage.	• Do not apply more than 24 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 14 days.
navel orangeworm	12 – 24 fl oz/A (0.19 – 0.38 lbs ai/A)	Make first application at the initiation of hull split (2 to 5% hull split). Reapply 14 days later. Under heavy infestation, reapply a third time 14 days later.	

Hazelnuts

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
filbertworm	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A)	Apply at initiation of egg hatch. Reapply at 14- to 21-day intervals under high pressure or sustained moth flight.	• Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 14 days
obliquebanded leafroller		**Spring (overwintering) generation:** Make 1 to 2 applications depending upon infestation level. **Summer generation:** Make the first application during the period of peak egg lay to early egg hatch (200 to 400 DD following biofix). Reapply 14 to 18 days later (usually 500 to 700 DD).	
European grapevine moth filbert leafroller light brown apple moth omnivorous leaftier		For control of surface of foliar feeding leafroller larvae, apply when larvae are feeding. Most effective crop protection results from application made at the initiation of egg hatch.	

Walnuts

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
codling moth (suppression only)	12 – 24 fl oz/A (0.19 – 0.38 lbs ai/A)	For each generation, apply at initiation of egg hatch (100 to 200 DD following biofox). Control of first generation may require second application (14- to 18-day re-treatment interval) to ensure complete coverage of rapidly expanding nuts and foliage. After nut growth and foliage expansion slows, a 14- to 21-day re-treatment interval may be required to provide control of extended moth flight. A higher rate in the rate range may be required for extended residual effectiveness, high pest infestation levels, larger trees, or heavy dense foliage.	• Do not apply more than 24 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 14 days
navel orangeworm	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A)	Apply at initiation of egg hatch.	
fall webworm redhumped caterpillar		Apply at first sign of larval infestation.	

Pecans

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
pecan nut casebearer	4 – 8 fl oz/A (0.06 – 0.12 lbs ai/A)	For each generation, apply at initiation of egg hatch (first generation is approximately 8 to 15 days following biofix). Control of first generation may require second application to ensure *complete coverage of rapidly* expanding nuts and foliage, or under conditions or extended egg lay. A higher rate in the rate range may be required for extended residual effectiveness, higher pest infestations, low crop load, larger trees, or heavy dense foliage.	• Do not apply more than 8 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 14 days.
hickory shuckworm	4 – 8 fl oz/A (0.06 – 0.12 lbs ai/A)	For early- to mid-season infestations reaching threshold levels as defined by state extension specialists or other qualified authorities, make applications at the initiation of egg hatch. For late-season infestations, initiate applications at halfshell hardening. Reapply at 14-day intervals to shuck split or while nuts are susceptible to heavy infestations.	
fall webworm walnut caterpillar		Apply at the first sign of larval infestation.	

Tree Nut Crops not Specifically Listed Above

Restrictions for control of lepidoptera larvae for which Zylo insecticide is registered:

- Do not apply more than 24 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year.
- **PHI:** 14 days.

Performance of Zylo insecticide against pests not listed on this label cannot be warranted nor can crop tolerance in all types and varieties of tree nuts be assured. If unsure, the user is advised to treat a few trees to observe for symptoms before treating large blocks of trees. Generally, optimum performance against lepidoptera pests (worms) is achieved when Zylo insecticide is applied at the initiation of egg hatch. Reapplication intervals of 14 to 20 days may be required if the plant part(s) to be protected from insect damage is rapidly growing or expanding or if pest infestations are heavy or extended.

Tropical Tree Fruits[1]

(Not registered for use in New York)

[1]*Tropical tree fruits including acerola, atemoya, avocado, biriba, black sapote, canistal, cherimoya, custard apple,* feijoa, guava, ilama, jaboticaba, longan, lychee, mamey sapote, mango, papaya, passionfruit, pulasan, rambutan, sapodilla, soursop, Spanish lime, star apple, starfruit, sugar apple, wax jambu.

Ground Application: Apply in a minimum of 50 gpa by conventional ground equipment to trees 10 feet tall or less. For trees greater than 10 feet tall, apply in a minimum of 100 gpa by conventional ground equipment. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
lepidopteran larvae including European grapevine moth guava moth (*Argyresthia*) leafrollers *light brown apple moth* loopers orange tortrix spanworms webbing worms western tussock moth	10 – 16 fl oz/A (0.16 – 0.25 lbs ai/A)	Apply at egg hatch or when first signs of feeding occur. Use a higher rate for heavier infestations and under conditions in which thorough coverage is difficult to achieve. *Under heavy infestations,* continuous moth flights and/or egg masses and larvae in all stages of development, reapply at a 6- to 10-day re-treatment interval to protect new growth until moth flights and/or hits subside.	• Do not apply more than a total of 64 fl oz (1 lb ai) per acre per year. • Do not make more than 5 applications per year. • **Acerola, Feijoa, Guava, Jaboticaba, Passionfruit, *Starfruit, Wax Jambu*** **PHI:** 3 days. **Minimum Re-treatment Interval:** 6 days • **Atemoya, Avocado, Biriba, Cherimoya, Custard Apple, Ilama, Soursop, Sugar Apple PHI:** 2 days. **Minimum Re-treatment Interval:** 6 days • **Black Sapote, Canistal, Mamey Sapote, Mango, Papaya, Sapodilla, Star Apple PHI:** 3 days. **Minimum Re-treatment Interval:** 10 days • **Longan, Lychee, Pulasan, Rambutan, Spanish Lime PHI:** 14 days. **Minimum Re-treatment Interval:** 10 days

Tuberous and Corm Vegetables (Except Potato) (Subgroup 1D)[1]

(Not registered for use in New York)

[1]Tuberous and corm vegetables (except potato) (subgroup 1D) including arracacha, arrowroot, bitter cassava, chayote (root), Chinese artichoke, chufa, dasheen, edible canna, ginger, Jerusalem artichoke, leren, sweet cassava, sweet potato, tanier, true yam, turmeric, yam bean.

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: *Apply in a minimum of 10 gpa. Use a higher carrier volume for heavy infestations and in* situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworms cabbageworms cutworm (suppression only) loopers saltmarsh caterpillar webworms	6 – 10 fl oz/A (0.09 – 0.16 lbs ai/A)	Apply at egg hatch or when first signs of feeding occur. Use a higher rate for heavier infestations and under conditions in which thorough coverage is more difficult. Under heavy infestations, continuous moth flights and/or egg masses and larvae in all stages of development, reapply to protect new growth until moth flights and/or hits subside.	• Do not apply more than a total of 64 fl oz (1 lb ai) per acre per year. • Do not make more than 3 applications per acre per year. • **Minimum Re-treatment Interval:** 14 days • **PHI:** 7 days. • See Rotational Crop Restrictions.

Storage and Disposal

Do not contaminate water, food or feed by storage and disposal.

Pesticide Storage: Store in a cool dry well-ventilated area, but not below 32°F.

Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Nonrefillable containers 5 gallons or less:

Container Handling: Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Refillable containers 5 gallons or larger:

Container Handling: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Nonrefillable containers 5 gallons or larger:

Container Handling: Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

IMPORTANT INFORMATION

READ BEFORE USING PRODUCT

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. and Seller harmless for any claims relating to such factors.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, UNITED PHOSPHORUS, INC. AND SELLER MAKE NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ON THIS LABEL.

To the extent consistent with applicable law, United Phosphorus, Inc. or Seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product and **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF UNITED PHOSPHORUS, INC. AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF UNITED PHOSPHORUS, INC. OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

United Phosphorus, Inc. and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by the duly authorized representative of United Phosphorus, Inc.

Rev. 05/23/2017

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

E-MAILED

May 22, 2017

OPP Decision Number: 522412

Ms. Sherry B. Hutcheson
Senior Regulatory Manager
United Phosphorus, Inc.
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406

Subject: Application Deficiency – Labeling Issues
Product Name: Zylo Insecticide
EPA File Symbol: 70506-GGE
Application Date: October 3, 2017
EPA Receipt Date: October 3, 2017

Dear Ms. Hutcheson:

The Agency has received and begun its in-depth review of the subject application and has determined that it is incomplete or that further information is needed. This letter is a written notification of those deficiencies and identifies your options under 40 CFR 152.105. Please ensure that you consider each of the options below in determining how and when you respond to this letter.

Pursuant to 40 CFR 152.105, you are allowed 75 days from the date of this letter to provide a response concerning the deficiencies listed in this letter. Your response may include making corrections or additions to complete the application, or notifying the Agency of the date on which you expect to complete the application, or withdrawing your application. If you do not respond to this letter within 75 days or if you respond with a date on which you expect to complete the application but fail to meet that scheduled date, the Agency will treat the application as if you had withdrawn it. Withdrawal concludes the Agency's review of your application. Any subsequent submission of the same application must then be submitted as a new application with a new deadline for EPA to make a determination on your application and subject to a new registration service fee.

Please note that the PRIA due date of May 25, 2017 for this new product registration may need to be renegotiated with you.

The deficiencies identified in the Agency's review at this time are with the proposed labeling:

1) Page 2 - In the User Safety Requirements box, justify the last bullet left.

SEE NEXT PAGE

2) Page 6 - Add the text "**When tank mixing with other products, observe all precautions, use restrictions, and other limitations on the labels for all products involved.**" or similar language to appear in bold below the last bullet and justified left under the "Mixing Order for Tank Mixes" header.

3) Page 10 - Add the text "Do not apply more than 16 fl oz per acre per application." to appear as a restriction in the Bushberries (Subgroup 13-07B) section.

4) Page 24 - Restore the term "strawberry" to appear as one of the crops under the Low Growing Berry (Except Cranberry)(Crop Group 13-07G) header. See next comment.

5) Page 37 - Remove the Strawberry use directions and, as needed, adjust the Table of Contents. NOTE: The uses on low growing berry should be presented together. When the additional low growing berry uses were registered as a group, a minimum retreatment interval of 10 days was added to these uses as a restriction. This 10 day restriction does not appear in the Strawberry use directions, though it does appear in the group uses on page 24.

6) Page 37 – In the Summer Generation directions in the Almonds section replace "Reapply at 10- to 18-day intervals under…" with "Reapply at 14- to- 18 day intervals under high….." to align with the application timing on the cited product.

Further review of your application and your response to the deficiencies may identify additional deficiencies and you will be so informed.

Please respond to this letter within 75 days of the stamped date by contacting me, Michael Walsh, at (703) 308-2972 or via email at walsh.michael@epa.gov or Eric Bohnenblust at (703) 347-0426 or via email at Bohnenblust.eric@epa.gov with a response and for any questions concerning this letter. When submitting information or data in response to this letter, a copy of this letter should accompany the submission to facilitate processing.

Sincerely,

Michael Walsh
Product Manager 11
Invertebrate & Vertebrate Branch 2
Registration Division
Office of Pesticide Programs

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

OFFICE OF PESTICIDE PROGRAMS
REGISTRATION DIVISION (7505P)

FEE

CONTAINS CONFIDENTIAL BUSINESS INFORMATION

DP Barcode No.: D436832 File Symbol No.: 70506-GGE Decision No.: 522412
PC Code: 121027 Company Name: United Phosphorous, Incorporated
Food Use: Yes Action Code: R 310 Product Name: Zylo Insecticide

DATE OUT: March 29, 2017

SUBJECT: End-Use Product Chemistry Review
Product Name: Zylo Insecticide

FROM: Bruce F. Kitchens, Chemist
Product Chemistry Team
Chemistry, Inerts and Toxicology Assessment Branch/RD (7505P)

Bruce F. Kitchens 3/29/17

SRam 3/30/17

TO: RM #10, Richard Gebken/Eric Bohnenblust
Invertebrate and Vertebrate Branch 2
Registration Division (7505P)

INTRODUCTION:

The registrant, United Phosphorous, Incorporated, is submitting an application to register the proposed end-use product, Zylo Insecticide. The active ingredient in this product is Methoxyfenozide (98.20% pai) at a label nominal concentration of 22.60% a.i. This product is intended for use as an insecticide end-use product. In addition, the registrant states that the proposed product is identical or substantially similar in composition to EPA Reg. No. 62719-442 Intrepid 2F Insecticide. In support of this request, the registrant is submitting a proposed basic Confidential Statement of Formula (CSF) dated 03 Oct 2016; a draft label and product chemistry data contained in MRID#s 500341-01 thru 500341-10. The Chemistry, Inerts and Toxicology Assessment Branch (CITAB) has been asked to review this submission.

SUMMARY OF FINDINGS:

1. Name of Active Ingredient: Methoxyfenozide (22.60% ai)

2. Has the registrant claimed substantial similarity to a registered product?

[X] Yes; [ ] No; [ ] NA; if yes give the registration number of the cited product.

EPA Reg. No. 62719-442

3. All of the source materials of the active ingredient are derived from registered sources- [X] Yes [ ] No

4. All inert ingredients have been screened by IIAB and are approved for the proposed labeled uses.

5. Confidential Statement of Formula:

[X] Basic - Dated: 03 Oct 2016 Resubmitted Dated:
[ ] Alternate – Dated: Resubmitted Dated:

Alternate CSF complies with 40 CFR 152.43
[ ] Yes [ ] No [X] NA

6. Product label

a. Ingredient statement: Nominal concentration of AI listed on CSF concurs with product label (PR Notice 91-2).
[X] Yes, if not, explain below:

Is the sub statement in compliance with PR Notice 97-6 (inert ingredient vs other ingredient)
[X] Yes; [ ] No; if not, explain below

Metallic equivalent:	[ ] Yes [X] NA
Soluble arsenic:	[ ] Yes [X] NA
Isomeric ratios:	[ ] Yes [X] NA
Acid Equivalent:	[ ] Yes [X] NA

b. Health related sub statements: Product contains?

Petroleum distillate at > 10%:	[ ] Yes; [ ] No; [X] NA
Methanol at > 4%:	[ ] Yes; [ ] No; [X] NA
Sodium nitrate/sodium nitrite	[ ] Yes; [ ] No; [X] NA

c. Physical chemical hazard statement: Product label requires a statement per 40 CFR §156.78 for flammability, explosive potential or electric insulator breakdown?
[ ] Yes [X] No

Is the sub statement in compliance with PR Notice 98-6 (Total Release Fogger)?
[ ] Yes; [ ] No; [X] NA; if not, explain below

d. Label requires an additional Storage and Disposal statement: [ ] Yes [X] No; if yes explain below

7. Group **A**: Product Chemistry Data

CITAB's determination of the acceptability for the proposed product is listed in the tables below.

Guideline No.	Study Title		Data submitted		CITAB's Assessment of Data	MRID Nos.
			Yes	No		
830.1550	Product Identity & Composition		X		A	500341-01
830.1600	Description of materials used to produce the product		X		A	500341-01
830.1650	Description of formulation process		X		A	500341-01
830.1670	Discussion on the formation of impurities		X		A	500341-01
830.1700	Preliminary analysis			X	N/A	
830.1750	Certified limits (158.350)	Standard certified limits	X		A	500341-01
		Proposed Limits				
		Justification for wider limits				
830.1800	Enforcement analytical method		X		A	500341-02

A = Acceptable, N = Not Acceptable, G = Data Gap, W = Waiver Request, I = In Progress, NA = Not Applicable; U = Upgradeable.

8. Group **B:**

Guideline No.	Study Title	Value or Qualitative Description	CITAB's Assessment of Data	MRID Nos.
830.6303	Physical State	Product is tan colored liquid with a non-characteristic odor.	A	500341-03
830.6314	Oxidation/ Reduction	Product is compatible with water, kerosene, mono-ammonium phosphate and zinc dust. Product is not compatible with potassium permanganate.	A	500341-04
830.6315	Flammability	Flash point >100°C	A	500341-05
830.6316	Explodability	No exothermic decomposition up to 430°C.	A	500341-06
830.6317	Storage stability	The active ingredient content remained stable after storage for 14 days at 54 ± 2°C.	A	500341-07
830.6320	Corrosion Characteristics	No change in the appearance of the test substance was noted during the course of the study. No change in the appearance of the test container in that it remained a yellow, cylindrical HDPE container with no cracking, leaking or distortion in shape.	A	500341-07
830.7000	pH	7.28 (1% dilution)		500341-08
830.7100	Viscosity	228 cP at 20°C 202.0 cP at 40°C	A	500341-09
830.7300	Density (units)	1.064 g/mL	A	500341-10

A = Acceptable, N = Not Acceptable, G = Data Gap, W = Waiver request, NA = Not applicable, I = In progress; U = Upgradeable.

CONCLUSIONS:

CITAB has reviewed the product chemistry data submitted for the proposed end-use product and has concluded that:

A. Substantial similarity to the cited product (Reg. No. 62719-442) from Product chemistry view point

[X] Similar
[ ] Not similar, give reasons
[ ] Identical
[ ] Not identical
[ ] Not applicable

B. Confidential Statement of formula

1. Basic CSF (dated 03 Oct 2016)
[X] Acceptable
[ ] Not Acceptable
[ ] Not Applicable

If not acceptable provide the reasons

2. Alternate CSF
[ ] Acceptable
[ ] Not Acceptable
[X] Not Applicable

If not acceptable give reasons

C. Group A Product Chemistry Data

[X] Acceptable
[ ] Not acceptable
[ ] Acceptable with the exception of Guideline(s): (provide the guideline number & explain)
[ ] Not required
[ ] Data cited

D. Group B Product chemistry data

[X] Acceptable
[ ] Not acceptable
[ ] Acceptable with the exception of Guideline(s): (provide the guideline number & explain)
[ ] Not required
[ ] Data cited

E. Product Label/Draft Label

Recommendations – Yes [X]; No [ ]

If yes, give recommendations below:

During testing it was determined that this product was not compatible with oxidizing agents. The following statement must be added to the physical and chemical hazards section of the label.

"Do not mix or allow coming in contact with oxidizing agents. Hazardous chemical reaction may occur."

Note: Please add additional remarks if necessary for each section

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY
ANDPOLLUTION PREVENTION

OFFICE OF PESTICIDE PROGRLMS
REGISTRATION DIVISION (7505P)

16/MAR/2017

MEMORANDUM

Subject: Acute Toxicity Review for EPA File Symbol 70506-GGE

Name of Pesticide Product:	Zylo Insecticide
EPA File Symbol:	70506-GGE
DP Barcode:	D436810
Decision No.:	522412
Action Code:	R310
PC Code:	121027 (methoxyfenozide)

From: Eugenia McAndrew, Biologist Eugenia McAndrew

Through: John C. Redden, M.S., Senior Risk Assessor JCR
Chemistry, Inerts and Toxicology Assessment Branch
Registration Division (7505P)

To: Eric Bohnenblust, RM Team 10
Invertebrate and Vertebrate Branch 2
Registration Division (7505P)

Applicant: United Phosphorus, Inc.
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406

FORMULATION FROM LABEL:

Active Ingredient(s):	% by wt.
Methoxyfenozide	22.6
Other Ingredient(s):	77.4
Total:	100.0%

ACTION REQUESTED: The Risk Manager requests a review of six acute toxicity studies submitted to support registration of the proposed product, EPA File Symbol 70506-GGE.

BACKGROUND: United Phosphorus, Inc. has submitted six acute toxicity studies (MRID Nos. 500341-11 to -16) to support the registration of the proposed product, Zylo Insecticide, EPA File Symbol 70506-GGE. The submission includes a basic CSF dated October 3, 2016 which must be reviewed and accepted by the product chemists in the Chemistry, Inerts and Toxicology Assessment Branch.

GLP: Yes

DEVIATIONS: None

LABELING: Based on the toxicity profile, the following are the precautionary and first aid statements for this product as obtained from the Label Review System:

PRODUCT ID #: 070506-00332

PRODUCT NAME: Zylo Insecticide

PRECAUTIONARY STATEMENTS

SIGNAL WORD: CAUTION

Hazards to Humans and Domestic Animals:

Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse. Wear: Long-sleeved shirt and long pants, socks, shoes, and waterproof gloves

First Aid:

If on skin:
-Take off contaminated clothing.
-Rinse skin immediately with plenty of water for 15-20 minutes.
-Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-xxx-xxxx for emergency medical treatment information.

User Safety Recommendations:

Users should:
-Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
-Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
-Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change clothing

DATA EVALUATION RECORD

Product Reg. No.: 70506-GGE
Product Name: Zylo Insecticide

1. DP BARCODE: 436810				
2. PC CODE: 121027				
3. CURRENT DATE: March 16, 2017				
4. TEST MATERIAL: Methoxyfenozide 240 g/L SC [Batch/Lot No. ARD/MFZ/240/SC/11; 243.95 g/L Methoxyfenazide; density 1.0653 g/Ml; 1.31; pH 7.46 (1% w/v aqueous suspension); tan colored liquid suspension]				
Study/Species/Lab Study # /Date	**MRID**	**Results**	**Tox Cat**	**Core Grade**
Acute oral toxicity / rat Jai Research Foundation Dept. of Toxicology Study # 401-1-01-13667 May 5, 2016 OCSPP 870.1100; OECD 425	50034111	LD_{50} > 5000 mg/kg Three animals were tested at the Limit Test of 5000 mg/kg. All animals survived and gained weight. No clinical signs of toxicity were observed. No gross macroscopic findings were noted at necropsy.	IV	A
Acute dermal toxicity / rat Jai Research Foundation Dept. of Toxicology Study # 401-1-01-13668 May 10, 2016 OCSPP 870.1200; OECD 402	50034112	LD_{50} > 2000 mg/kg (both sexes) All animals survived and gained weight. No clinical signs of toxicity were observed. No gross abnormalities were noted at necropsy.	III	A
Acute inhalation toxicity / rat Jai Research Foundation Dept. of Toxicology Study # 401-1-01-13669 May 4, 2016 OCSPP 870.1300; OECD 403	50034113	LC_{50} > 5.139 mg/L (both sexes) MMAD: 3.71 µm GSD: 1.56 All animals survived. Body weight losses occurred on days 1 and 3 but all animals gained weight by day 7 and throughout the end of the study. No clinical signs of toxicity were observed and no gross	IV	A

		abnormalities were noted at necropsy.		
Primary eye irritation / rabbit Jai Research Foundation Dept. of Toxicology Study # 401-1-01-13671 May 3, 2016 OCSPP 870.2400; OECD 405	50034114	3 females tested pH = 6.82 (1% solution in distilled water) The test substance was administered as received. No corneal opacity, iritis or positive conjunctivitis were observed. The only irritation observed was score of 1 for conjunctival redness (not a positive effect) in all eyes at 1 hr only. All eyes free of irritation at 24 hours.	IV	A
Primary dermal irritation / rabbit Jai Research Foundation Study # 401-1-01-13670 May 3, 2016 OCSPP 870.2500; OECD 404	50034115	3 males tested pH = 6.82 (1% solution in distilled water) The test substance was administered as received. PDI = 0.25 Very slight erythema was observed at all test sites 1 hr after patch removal. All sites were free of irritation at 24 hours.	IV	A
Dermal sensitization/guinea pig/Maximization Jai Research Foundation Dept. of Toxicology Study # 401-1-01-13672 June 10, 2016 OCSPP 870.2600; OECD 406	50034116	*Not* a sensitizer The results of historical positive control study are appropriate.	--	A

Core Grade Key: A =Acceptable, S = Supplementary, U = Unacceptable, D = Data Gap W= Waived

Please read instructions on reverse before completing form.
expires 05-31-98

Form Approved, OMB No. 2070-0060, Approval

EPA United States **Environmental Protection Agency** Washington, DC 20460

☒ **Registration** ☐ **Amendment** ☐ **Other:**

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
70506-_____	Richard Gebken	☐ None ☐ Restricted
4. Company/Product (Name)	PM#	
Zylo Insecticide	10	

5. Name and Address of Applicant *(Include ZIP Code)*
United Phosphorus, Inc.
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406

☐ *Check if this is a new address*

6. **Expedited Review.** In accordance with FIFRA Section 3(c)(3)(b)(I), my product is similar or identical in composition and labeling to:
EPA Reg. No. 62719-442

Product Name Intrepid 2F Insecticide

Section - II

☐ Amendment – Explain below.
☐ Resubmission in response to Agency letter dated _____
☐ Notification - Explain below.
☐ Final printed labels in response to Agency letter dated _____
☒ "Me Too" Application
☐ Other - Explain below

Explanation: Use additional page(s) if necessary. (For Section I and Section II.)

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
☐ Yes* ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Metal ☐ Plastic ☐ Glass ☐ *Paper* ☒ Other (Specify)
***Certification must be submitted**	If "Yes" Unit Packaging wgt. / No. per container	If "Yes" Package wgt. / No. per container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
☒ Label ☐ Container	**2.5 gallon jug; 250 gallon tote**	☐ On Label ☒ On labeling accompanying product

6. Manner in Which Label is Affixed to Product ☐ Lithograph ☒ Paper glued ☐ Stenciled ☐ Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application)*

Name	Title	Telephone No. (Include Area Code)
Sherry B. Hutcheson	Sr. Regulatory Manager	229-247-9041

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received **(Stamped)**

2. Signature	3. Title
Sherry B. Hutcheson	Sr. Regulatory Manager
4. Typed Name	5. Date
Sherry B. Hutcheson	05/10/2017

EPA Form 8570-1 (Rev. 8-94) Previous editions are obsolete **White- EPA File Copy (original) Yellow- Applicant Copy**

Please read instructions on reverse before completing form.

Form Approved, OMB No. 2070-0060, Approval expires 05-31-98

EPA	United States Environmental Protection Agency Washington, DC 20460	☒ Registration ☐ Amendment ☐ Other:	OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
70506-_____	Richard Gebken	☐ None ☐ Restricted
4. Company/Product (Name)	PM#	
Zylo Insecticide	10	

5. Name and Address of Applicant *(Include ZIP Code)*
United Phosphorus, Inc.
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406

☐ *Check if this is a new address*

6. **Expedited Review.** In accordance with FIFRA Section 3(c)(3)(b)(I), my product is similar or identical in composition and labeling to:
EPA Reg. No. 62719-442

Product Name Intrepid 2F Insecticide

Section - II

☐ Amendment – Explain below.
☐ Resubmission in response to Agency letter dated _____
☐ Notification - Explain below.
☐ Final printed labels in response to Agency letter dated _____
☒ "Me Too" Application
☐ Other - Explain below

Explanation: Use additional page(s) if necessary. (For Section I and Section II.)

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
☐ Yes* ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Metal ☐ Plastic ☐ Glass ☐ Paper ☒ Other (Specify)
***Certification must be submitted**	If "Yes" Unit Packaging wgt. / No. per container	If "Yes" Package wgt. / No. per container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
☒ Label ☐ Container	**2.5 gallon jug**	☐ On Label ☒ On labeling accompanying product

6. Manner in Which Label is Affixed to Product ☐ Lithograph ☒ Paper glued ☐ Stenciled ☐ Other _____

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application)*

Name	Title	Telephone No. (Include Area Code)
Sherry B. Hutcheson	Sr. Regulatory Manager	229-247-9041

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received **(Stamped)**

2. Signature	3. Title
Sherry B. Hutcheson	Sr. Regulatory Manager
4. Typed Name	5. Date
Sherry B. Hutcheson	10/03/2016

EPA Form 8570-1 (Rev. 8-94) Previous editions are obsolete

White- EPA File Copy (original) Yellow- Applicant Copy

United Phosphorus, Inc.
Sherry B. Hutcheson
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406
Phone: (229) 247-9041

Document Processing Desk (REGFEE)
Office of Pesticide Programs (7504P)
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

October 3, 2016
MRID 50034100

ATTENTION: Richard Gebken (PM 10)

Subject: Application for registration of Zylo Insecticide

By way of this transmittal, United Phosphorus, Inc. is submitting an application for the **registration** for Zylo Insecticide. We believe this qualifies as an action code **R310**.

In addition to this transmittal letter, this submission comprises one volume of Administrative Materials, and three copies each study to satisfy the data requirements as listed below.

Enclosed in the Administrative Materials are:
(1) Application for Pesticide Registration, EPA Form 8570-1
(1) Proof of PRIA 3 Service Fee Payment
(1) Copy of the proposed Zylo Insecticide label
(1) Confidential Statement of Formula for Zylo Insecticide, EPA Form 8570-4
(1) Data Matrices, Public and Internal, EPA Form 8570-35
(1) Formulators Exemption Statement; EPA Form 8570-27

MRID No.	Guideline No.	Study No.	Study Name and description
50034100	Not Applicable		Administrative Documents
50034101	830.1550 through 830.1800	UPI-2016-10	Zylo Insecticide: Part A Product Chemistry
50034102	830.1800	228-2-12-13679	(2016) Moinuddin, Validation of Analytical Method for Determination of Active Ingredient Content of Methoxyfenozide 240 g/L SC, Jai Research Foundation, April 23, 2016, pp 47.
50034103	830.6302, 6303, 6304	201-2-11-13673	(2016) Moinuddin, Appearance (Colour, Physical State and Odour) of Methoxyfenozide 240 g/L SC, Jai Research Foundation, April 27, 2016, pp. 23.
50034104	830.6314	212-2-11-13675	(2016) Moinuddin, Oxidation/ Reduction Properties of Methoxyfenozide 240 g/L SC, Jai Research Foundation, April 29, 2016, pp. 24.

United Phosphorus, Inc.
Sherry B. Hutcheson
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406
Phone: (229) 247-9041

MRID No.	Guideline No.	Study No.	Study Name and description
50034105	830.6315	221-2-11-13678	(2016), Moinuddin, Flash Point of Methoxyfenozide 240 g/L SC, Jai Research Foundation, April 27, 2016, pp. 23.
50034106	830.6316	238-2-11-13680	(2016) Moinuddin, Explodability of Methoxyfenozide 240 g/L SC, Jai Research Foundation, April 27, 2016, pp. 27.
50034107	830.6317 & 830.6320	234-2-11-13682	(2016) Moinuddin, Accelerated Storage Stability and Corrosion Characteristics of Methoxyfenozide 240 g/L SC, Jai Research Foundation, April 29, 2016, pp. 81.
50034108	830.7000	210-2-11-13674	(2016) Patel, D.R.,, pH of Methoxyfenozide 240 g/L SC, Jai Research Foundation, September 1, 2016, pp. 25.
50034109	830.7100	214-2-11-13676	(2016) Moinuddin, Viscosity of Methoxyfenozide 240 g/L SC, Jai Research Foundation, April 27, 2016, pp. 25
50034110	830.7300	204-2-11-14966	(2016), Patel, D.R, Density of Methoxyfenozide 240 g/L SC, Jai Research Foundation, September 1, 2016, pp. 29.
50034111	870.1100	401-1-01-13667	(2016), Verma R., Acute Oral Toxicity Study of Methoxyfenozide 240 g/L SC in Rats, Jai Research Foundation, May 5, 2016, pp. 43.
50034112	870.1200	403-1-01-13668	(2016), Verma, R., Acute Dermal Toxicity Study of Methoxyfenozide 240 g/L SC in Rats, Jai Research Foundation, May 10, 2016, pp. 38.
50034113	870.1300	405-1-01-13669	(2016), Chhimwal, R., Acute Inhalation Toxicity Study of Methoxyfenozide 240 g/L SC in Rats, Jai Research Foundation, May 4, 2016, pp. 50.
50034114	870.2400	407-1-01-13671	(2016), Patel, S., Acute Eye Irritation Study of Methoxyfenozide 240 g/L SC in Rabbits, Jai Research Foundation, May 3, 2016, pp. 39.
50034115	870.2500	406-1-01-13670	(2016), Patel, S., Acute Dermal Irritation Study of Methoxyfenozide 240 g/L SC in Rabbits, Jai Research

United Phosphorus, Inc.
Sherry B. Hutcheson
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406
Phone: (229) 247-9041

MRID No.	Guideline No.	Study No.	Study Name and description
			Foundation, May 3, 2016, pp. 35.
50034116	870.2600	408-1-01-13672	(2016) Chhimwal, R., Skin Sensitisation Study of Methoxyfenozide 240 g/L SC in Guinea Pigs, Jai Research Foundation, June 10, 2016, pp. 59,

If you have any questions or comments, please feel free to contact me at sherry.hutcheson@uniphos.com or 229-247-9041.

Sincerely,

Sherry B. Hutcheson

Sherry B. Hutcheson,
Sr. Regulatory Manager

Form approved. OMB No. 2070-0060, 2070-0057, 2070-0107, 2070-0122, 2070-0164.

EPA

United States
Environmental Protection Agency
Washington, DC 20460

Formulator's Exemption Statement

(40 CFR 152.85)

Applicant's Name and Address	EPA File Symbol/Registration Number
United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19406	70506-_____
	Product Name Zylo Insecticide
	Date of Confidential Statement of Formula *(EPA Form 8570-4)* 10/03/2016

As an authorized representative of the applicant for registration of the product identified above, I certify that:

(1) This product contains the following active ingredient(s):

Methoxyfenozide (121027)

(2) Of these, each active ingredient listed in paragraph (4) is present solely as the result of the use of that active ingredient in the manufacturing, formulation or repackaging another product which contains that active ingredient which is registered under FIFRA Section 3, is purchased by us from another person and meets the requirements of 40 CFR section 158.50(e)(2) or (3).

(3) Indicate by checking (A) or (B) below which paragraph applies:

☑ (A) An accurate Confidential Statement of Formula *(EPA FORM 8570-4)* for the above identified product is attached to this statement. That formula statement indicates, by company name, registration number, and product name, the source of the active ingredient(s) listed in paragraph (1).

OR

☐ (B) The Confidential Statement of Formula (CSF)(EPA Form 8570-4) referenced above and on file with the EPA is complete, current, an accurate and contains the information required on the current CSF.

(4) The following active ingredients in this product qualify for the formulator's exemption.

Source

Active Ingredient	Product Name	Registration Number
Methoxyfenozide	[redacted]	[redacted]

Signature	Name and Title	Date
Sherry B. Hutcheson	Sherry Hutcheson, Sr. Reg. Manager	10/03/2016

EPA Form 8570-27 (Rev. 06-2004)

Copy 1 – EPA
Copy 2 - Applicant copy

Product ingredient source information may be entitled to confidential treatment

Form Approved OMB Nos. 20[illegible]60; 2070-0057; 2070-0107; 2070-0122; 2070-0164

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
1200 Pennsylvania Avenue, N.W.
WASHINGTON, D.C. 20460

Certification with Respect to Citation of Data

Applicant's/Registrant's Name, Address, and Telephone Number United Phosphorus, Inc. 630 Freedom Business Center, Suite 402, King of Prussia, PA 19406 229-2	EPA Registration Number/File Symbol 70506-GGE
Active Ingredient(s) and/or representative test compound(s) methoxyfenozide	Date 11/16/2016
General Use Pattern(s) (list all those claimed for this product using 40 CFR Part 158) terrestrial, non-food, food	Product Name Zylo Insecticide

NOTE: If your product is a 100% repackaging of another purchased EPA-registered product labeled for all the same uses on your label, you do not need to submit this form. You must submit the Formulator's Exemption Statement (EPA Form 8570-27).

☐ I am responding to a Data-Call-In Notice, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).

SECTION I: METHOD OF DATA SUPPORT (Check one method only)

☐ I am using the cite-all method of support, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).	☑ I am using the selective method of support (or cite-all option under the selective method), and have included with this form a completed list of data requirements (the Data Matrix form must be used).

SECTION II: GENERAL OFFER TO PAY

[Required if using the cite-all method or when using the cite-all option under the selective method to satisfy one or more data requirements]

☑ I hereby offer and agree to pay compensation, to other persons, with regard to the approval of this application, to the extent required by FIFRA.

SECTION III: CERTIFICATION

I certify that this application for registration, this form for reregistration, or this Data-Call-In response is supported by all data submitted or cited in the application for registration, the form for reregistration, or the Data-Call-In response. In addition, if the cite-all option or cite-all option under the selective method is indicated in Section I, this application is supported by all data in the Agency's files that (1) concern the properties or effects of this product or an identical or substantially similar product, or one or more of the ingredients in this product; and (2) is a type of data that would be required to be submitted under the data requirements in effect on the date of approval of this application if the application sought the initial registration of a product of identical or similar composition and uses .

I certify that for each exclusive use study cited in support of this registration or reregistration, that I am the original data submitter or that I have obtained the written permission of the original data submitter to cite that study.

I certify that for each study cited in support of this registration or reregistration that is not an exclusive use study, either: (a) I am the original data submitter; (b) I have obtained the permission of the original data submitter to use the study in support of this application; (c) all periods of eligibility for compensation have expired for the study; (d) the study is in the public literature; or (e) I have notified in writing the company that submitted the study and have offered (I) to pay compensation to the extent required by sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA; and (ii) to commence negotiations to determine the amount and terms of compensation, if any, to be paid for the use of the study.

I certify that in all instances where an offer of compensation is required, copies of all offers to pay compensation and evidence of their delivery in accordance with sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA are available and will be submitted to the Agency upon request. Should I fail to produce such evidence to the Agency upon request, I understand that the Agency may initiate action to deny, cancel or suspend the registration of my product in conformity with FIFRA.

I certify that the statements I have made on this form and all attachments to it are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

Signature	Date	Typed or Printed Name and Title
Sherry B. Hutcheson	11/16/2016	Sherry Hutcheson Sr. Regulatory Manager

EPA Form 8570-34 (12-2003) Electronic and Paper versions available. Submit only Paper version.

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per response for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not send the form to this address.

DATA MATRIX

Date 10/03/2016	EPA Reg No./File Symbol 70506-xxxxx	Page 1 of 3
Applicant's/Registrant's Name & Address United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19406	Product Zylo Insecticide	
Ingredient Methoxyfenozide (121027)		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
830.1550	Product identity and composition	50034101	United Phosphorus, Inc.	OWN	
830.1600	Description of Materials Used to Produce the Product	50034101	United Phosphorus, Inc.	OWN	
830.1620	Description of the Production Process	50034101	United Phosphorus, Inc.	OWN	
830.1650	Description of the Formulation Process	50034101	United Phosphorus, Inc.	OWN	
830.1670	Discussion of Formation of Impurities	50034101	United Phosphorus, Inc.	OWN	
830.1700	Preliminary Analysis	50034101	United Phosphorus, Inc.	OWN	
830.1750	Certified Limits	50034101	United Phosphorus, Inc.	OWN	
830.1800	Enforcement Analytical Method	50034102	United Phosphorus, Inc.	OWN	
830.6302	Color	50034103	United Phosphorus, Inc.	OWN	
830.6303	Physical State	50034103	United Phosphorus, Inc.	OWN	
830.6304	Odor	50034103	United Phosphorus, Inc.	OWN	
830.6313	Stability to Normal and Elevated Temperatures, Metal and Metal Ions				Not applicable[1]
830.6314	Oxidation/Reduction: Chemical Incompatibility	50034104	United Phosphorus, Inc.	OWN	

Signature	Name and Title	Date
Sherry B. Hutcheson	Sherry Hutcheson, Sr. Regulatory Manager	10/03/2016

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

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DATA MATRIX

Date 10/03/2016	EPA Reg No./File Symbol 70506-xxxxx	Page 2 of 3
Applicant's/Registrant's Name & Address United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19406	Product Zylo Insecticide	
Ingredient Methoxyfenozide (121027)		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
830.6315	Flammability	50034105	United Phosphorus, Inc.	OWN	
830.6316	Explodability	50034106	United Phosphorus, Inc.	OWN	
830.6317	Storage Stability	50034107	United Phosphorus,Inc.	OWN	
830.6319	Miscibility				Not applicable[2]
830.6320	Corrosion Characteristics	50034107	United Phosphorus,Inc.	OWN	
830.6321	Dielectric Breakdown Voltage				Not applicable[3]
830.7000	pH	50034108	United Phosphorus, Inc.	OWN	
830.7050	UV/Visible Absorption				Not Applic[illegible]
830.7100	Viscosity	50034109	United Phosphorus, Inc.		
830.7200	Melting Point/Melting Range				Not Applicable[1]
830.7220	Boiling Point/Boiling Range				Not Applicable[1]
830.7300	Density/Relative Density/Bulk Density	50034110	United Phosphorus, Inc.	OWN	
830.7370	Dissociation Constants in Water				Not Applicable[1]
830.7550	Partition Coefficient (n-octanol/water), Shake Flask Method				Not Applicable[1]
830.7560	Partition Coefficient (n-octanol/water), Generator Method				Not Applicable[1]
830.7560	Partition Coefficient (n-octanol/water), Estimation by Liquid Chromatography				Not Applicable[1]

Signature	Name and Title	Date
Sherry B. Hutcheson	Sherry Hutcheson, Sr. Regulatory Manager	10/03/2016

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

DATA MATRIX

Date 10/03/2016	EPA Reg No./File Symbol 70506-xxxxx	Page 3 of 3
Applicant's/Registrant's Name & Address United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19406	Product Zylo Insecticide	
Ingredient Methoxyfenozide (121027)		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
830.7840	Water Solubility: Column Elution Method, Shake Flask Method				Not Applicable[1]
830.7860	Water Solubility: Generator Column Method				Not Applicable[1]
830.7950	Vapor Pressure				Not Applicable[1]
870.1100	Acute oral toxicity	50034111	United Phosphorus, Inc.	OWN	
870.1200	Acute dermal toxicity	50034112	United Phosphorus, Inc.	OWN	
870.1300	Acute inhalation toxicity	50034113	United Phosphorus, Inc.	OWN	
870.2400	Eye irritation	50034114	United Phosphorus, Inc.	OWN	
870.2500	Skin irritation	50034115	United Phosphorus, Inc.	OWN	
870.2600	Skin sensitization	50034116	United Phosphorus, Inc.	OWN	

Footnotes for Data Matrix:

1. Zylo Insectide is not a TGAI.
2. Zylo Insecticide is not an emulsifiable liquid or to be diluted with petroleum solvents.
3. Zylo Insecticide is not intended for use around electrical equipment.

Signature	Name and Title	Date
Sherry B. Hutcheson	Sherry Hutcheson, Sr. Regulatory Manager	10/03/2016

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per response for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not send the form to this address.

DATA MATRIX

Date 10/03/2016	EPA Reg No./File Symbol 70506-xxxxx	Page 1 of 3
Applicant's/Registrant's Name & Address United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19406	Product Zylo Insecticide	
Ingredient Methoxyfenozide (121027)		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
[redacted]			United Phosphorus, Inc.	OWN	
			United Phosphorus, Inc.	OWN	
			United Phosphorus, Inc.	OWN	
			United Phosphorus, Inc.	OWN	
			United Phosphorus, Inc.	OWN	
			United Phosphorus, Inc.	OWN	
			United Phosphorus, Inc.	OWN	
			United Phosphorus, Inc.	OWN	
			United Phosphorus, Inc.	OWN	
			United Phosphorus, Inc.	OWN	
			United Phosphorus, Inc.	OWN	
					Not applicable[1]
			United Phosphorus, Inc.	OWN	

Signature	Name and Title	Date
Sherry B. Hutcheson	Sherry Hutcheson, Sr. Regulatory Manager	10/03/2016

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
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DATA MATRIX

Date 10/03/2016	EPA Reg No./File Symbol 70506-xxxxx	Page 2 of 3
Applicant's/Registrant's Name & Address United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19406	Product Zylo Insecticide	
Ingredient Methoxyfenozide (121027)		

Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
[redacted]			United Phosphorus, Inc.	OWN	
			United Phosphorus, Inc.	OWN	
			United Phosphorus,Inc.	OWN	
					Not applicable[2]
			United Phosphorus,Inc.	OWN	
					Not applicable[3]
			United Phosphorus, Inc.	OWN	
					Not Applic[redacted]
			United Phosphorus, Inc.		
					Not Applicable[1]
					Not Applicable[1]
			United Phosphorus, Inc.	OWN	
					Not Applicable[1]
					Not Applicable[1]
					Not Applicable[1]
					Not Applicable[1]

Signature	Name and Title	Date
Sherry B. Hutcheson	Sherry Hutcheson, Sr. Regulatory Manager	10/03/2016

Form Approved OMB No. 2070-0060

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

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DATA MATRIX

Date 10/03/2016			EPA Reg No./File Symbol 70506-xxxxx		Page 3 of 3
Applicant's/Registrant's Name & Address United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19406			Product Zylo Insecticide		
Ingredient Methoxyfenozide (121027)					
Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
[redacted]					Not Applicable[1]
					Not Applicable[1]
					Not Applicable[1]
			United Phosphorus, Inc.	OWN	
			United Phosphorus, Inc.	OWN	
			United Phosphorus, Inc.	OWN	
			United Phosphorus, Inc.	OWN	
			United Phosphorus, Inc.	OWN	
			United Phosphorus, Inc.	OWN	

Footnotes for Data Matrix:

1. Zylo Insectide is not a TGAI.
2. Zylo Insecticide is not an emulsifiable liquid or to be diluted with petroleum solvents.
3. Zylo Insecticide is not intended for use around electrical equipment.

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Signature	Name and Title	Date
Sherry B. Hutcheson	Sherry Hutcheson, Sr. Regulatory Manager	10/03/2016

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460
OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION
OFFICE OF PESTICIDE PROGRAMS REGISTRATION DIVISION (7505P)

DP BARCODE No.: D436832 **FILE SYMBOL No.**: 70506-GGE (screen) **DECISION No.**: 522412
PC Code: 121027 **Company Name:** United Phosphorus, Inc.
FOOD Use: Yes **ACTION CODE**: R 310 **PRODUCT NAME**: Zylo Insecticide

DATE OUT: January 23, 2017

SUBJECT: Completeness Check Screen for End-Use Product

Product Name: Zylo Insecticide

Bruce Kitchens 1/23/17

FROM: Bruce Kitchens, Chemist
Product Chemistry Team
Chemistry, Inerts and Toxicology Assessment Branch/RD (7505P)

TO: RM #10, Richard Gebken/Eric Bohnenblust
Invertebrate and Vertebrate Branch 2
Registration Division (7505P)

Company Name: United Phosphorus, Inc.
Active Ingredient: Methoxyfenozide (22.60% a.i.)

MRID Nos.: 500341-01 thru 500341-10

CONCLUSION:

Deficiencies: No
(If there are deficiencies they are indicated below each heading as Note 1, Note 2 Etc).

Group A: All required data submitted

Group B: *All* data required submitted.

CSF: Basic CSF dated 03 Oct 2016

Product label: In Documentum

Note 1: The test substance was found to be incompatible with oxidizing agents. Therefore, the registrant is recommended to add the following warning on the product label under Physical-Hazards:

"Do not mix or allow contact with oxidizing agent. Hazardous Chemical reaction may occur"

Note to PM: If the deficiencies are found in the screen results, please inform the registrant and return to me the corrected deficiencies in response to 10-day letter, so that it can be attached to the original bean, if the data package is still in CITAB. New Bean is required in case the bean has been closed by CITAB. Thank you.

Bohnenblust, Eric

From: Sherry Hutcheson <sherry.hutcheson@uniphos.com>
Sent: Monday, May 15, 2017 1:23 PM
To: Bohnenblust, Eric
Cc: Walsh, Michael
Subject: RE: label comments for 70506-GGE
Attachments: 70506-xxxxx. 20170515.Zylo Insecticide clean.pdf; 70506-xxxxx. 20170515.Zylo Insecticide marked.pdf

Attached.
Sherry

Sherry Hutcheson
Sr. Regulatory Manager
United Phosphorus, Inc.
Office: 229-247-9041
Mobile: 229-251-7134

From: Bohnenblust, Eric [mailto:Bohnenblust.Eric@epa.gov]
Sent: Monday, May 15, 2017 11:45 AM
To: Sherry Hutcheson <sherry.hutcheson@uniphos.com>
Cc: Walsh, Michael <Walsh.Michael@epa.gov>
Subject: RE: label comments for 70506-GGE

Thanks Sherry.

I have one more minor comment. In the revised table for the low growing berry group, the rate is 4-12 oz and the lb a.i. is (0.09-0.19) 0.09 lbs a.i./acre corresponds to 6 oz. The cited product label is labeled at 6 for the lower end of the rates. $ oz. is fine if you want to keep that, but 4 oz. is equivalent to 0.06 lb. ai.

Can you please correct this so the numbers match?

Thanks.
Eric

From: Sherry Hutcheson [mailto:sherry.hutcheson@uniphos.com]
Sent: Friday, May 12, 2017 2:42 PM
To: Bohnenblust, Eric <Bohnenblust.Eric@epa.gov>
Cc: Walsh, Michael <Walsh.Michael@epa.gov>
Subject: RE: label comments for 70506-GGE

Here you go Eric,
Have a nice weekend.
Sherry

Sherry Hutcheson
Sr. Regulatory Manager
United Phosphorus, Inc.
Office: 229-247-9041

Mobile: 229-251-7134

From: Bohnenblust, Eric [mailto:Bohnenblust.Eric@epa.gov]
Sent: Friday, May 12, 2017 2:07 PM
To: Sherry Hutcheson <sherry.hutcheson@uniphos.com>
Cc: Walsh, Michael <Walsh.Michael@epa.gov>
Subject: RE: label comments for 70506-GGE

Hi Sherry,

I have one additional request, can you please remove the highlighting of the strawberry use site. If you could get me that the end of the day Monday I would appreciate it.

Thanks.
Eric

From: Sherry Hutcheson [mailto:sherry.hutcheson@uniphos.com]
Sent: Thursday, May 11, 2017 8:19 AM
To: Bohnenblust, Eric <Bohnenblust.Eric@epa.gov>
Cc: Walsh, Michael <Walsh.Michael@epa.gov>
Subject: RE: label comments for 70506-GGE

Thanks Eric, because I will be asked by my management.
Regards,
Sherry

Sherry Hutcheson
Sr. Regulatory Manager
United Phosphorus, Inc.
Office: 229-247-9041
Mobile: 229-251-7134

From: Bohnenblust, Eric [mailto:Bohnenblust.Eric@epa.gov]
Sent: Thursday, May 11, 2017 8:17 AM
To: Sherry Hutcheson <sherry.hutcheson@uniphos.com>
Cc: Walsh, Michael <Walsh.Michael@epa.gov>
Subject: RE: label comments for 70506-GGE

Sherry,

Thanks. Yes, I sent the letter to the other registrant this morning.

Eric

From: Sherry Hutcheson [mailto:sherry.hutcheson@uniphos.com]
Sent: Thursday, May 11, 2017 8:14 AM
To: Bohnenblust, Eric <Bohnenblust.Eric@epa.gov>
Cc: Walsh, Michael <Walsh.Michael@epa.gov>
Subject: RE: label comments for 70506-GGE

Eric,

Bohnenblust, Eric

From: Sherry Hutcheson <sherry.hutcheson@uniphos.com>
Sent: Thursday, May 11, 2017 8:14 AM
To: Bohnenblust, Eric
Cc: Walsh, Michael
Subject: RE: label comments for 70506-GGE
Attachments: 70506-xxxxx. 20170511.ZyloInsecticide clean.pdf; 70506-xxxxx. 20170511.ZyloInsecticide marked.pdf

Eric,
Attached.
I'm presuming the Agency is sending the other registrant an initiated letter for immediate change?
Sherry

Sherry Hutcheson
Sr. Regulatory Manager
United Phosphorus, Inc.
Office: 229-247-9041
Mobile: 229-251-7134

From: Bohnenblust, Eric [mailto:Bohnenblust.Eric@epa.gov]
Sent: Wednesday, May 10, 2017 2:53 PM
To: Sherry Hutcheson <sherry.hutcheson@uniphos.com>
Cc: Walsh, Michael <Walsh.Michael@epa.gov>
Subject: RE: label comments for 70506-GGE

Hi Sherry,

Thanks for the response, label, and other documents. I am aware of the issue on the cited label and listing strawberry twice was a mistake and I am requesting the other registrant change their label to only list strawberry once as well. Because we are making the other registrant to change this, please make the change to only list strawberry once and send me a revised label.

If you have any additional questions let me know.

Thanks.
Eric

From: Sherry Hutcheson [mailto:sherry.hutcheson@uniphos.com]
Sent: Wednesday, May 10, 2017 10:09 AM
To: Bohnenblust, Eric <Bohnenblust.Eric@epa.gov>
Cc: Walsh, Michael <Walsh.Michael@epa.gov>
Subject: RE: label comments for 70506-GGE

Good morning Eric,
Please find attached the information you requested. Regarding your comment about the table – thank you for bringing that to our attention and it has been corrected. Regarding your statement about strawberry listed in the ' Low Growing

Berry' group – please see cited label EPA Reg. No. 62719-442. This information is currently listed the same as the me-too product and we would prefer to keep both.

Regarding the storage and disposal statements. The product is planned to be packaged in a 2.5 gallon container but there is always the possibility that other container sizes may be eventually used in the future – hence the reason for listing additional container handling statements; therefore we wish to retain both. The comment on the application form has been amended to add additional sizes.

Regards,
Sherry

Sherry Hutcheson
Sr. Regulatory Manager
United Phosphorus, Inc.
Office: 229-247-9041

From: Bohnenblust, Eric [mailto:Bohnenblust.Eric@epa.gov]
Sent: Thursday, May 04, 2017 2:24 PM
To: Sherry Hutcheson <sherry.hutcheson@uniphos.com>
Cc: Walsh, Michael <Walsh.Michael@epa.gov>
Subject: RE: label comments for 70506-GGE

Hi Sherry,

Attached is a label with some additional comments and I have a few comments below.

A few things:

The table for the low growing berry subgroup is a copy of the table for the non-grass forage use. These tables should be different, I think based on their proximity to each other, this was a simple copy past error initially.

Strawberries are listed twice, they should only be listed once. Please delete one of the instances and make sure the table matches the table for the cited product.

Please send me an updated 8570-1 form with the section for container size indicating this product will be packaged in containers smaller and larger than 5 gallons. The current form only lists containers smaller than 5 gallons. This directly impacts the storage and disposal statements. If you only wish to have the smaller containers you should delete the storage and disposal statements for the containers larger than 5 gallons.

If you could get me a revised label by the the end of day next Wednesday I would appreciate it thanks. Please let me know if you have any questions.

Eric

From: Sherry Hutcheson [mailto:sherry.hutcheson@uniphos.com]
Sent: Friday, April 28, 2017 3:10 PM
To: Bohnenblust, Eric <Bohnenblust.Eric@epa.gov>
Cc: Walsh, Michael <Walsh.Michael@epa.gov>
Subject: RE: label comments for 70506-GGE

Eric,
Here are the marked and clean copies.

Sherry

Sherry Hutcheson
Sr. Regulatory Manager
United Phosphorus, Inc.
Office: 229-247-9041
Mobile: 229-251-7134

From: Bohnenblust, Eric [mailto:Bohnenblust.Eric@epa.gov]
Sent: Tuesday, April 25, 2017 6:52 AM
To: Sherry Hutcheson <sherry.hutcheson@uniphos.com>
Cc: Walsh, Michael <Walsh.Michael@epa.gov>
Subject: RE: label comments for 70506-GGE

Hi Sherry,

With PRIA actions we prefer to get things done as soon as possible to avoid a lot of down time, in case there are major issues with our comments, and we prefer to get things done well in advance of PRIA dates whenever possible. If you need some additional time that is not a problem just let me know approximately how much time, we are a month away from the PRIA date. However, the sooner we get this done, the sooner you have your product too.

Thanks.
Eric

From: Sherry Hutcheson [mailto:sherry.hutcheson@uniphos.com]
Sent: Monday, April 24, 2017 4:43 PM
To: Bohnenblust, Eric <Bohnenblust.Eric@epa.gov>
Cc: Walsh, Michael <Walsh.Michael@epa.gov>
Subject: RE: label comments for 70506-GGE

Good afternoon Eric,
I will do my best. Any reason for the quick turn around?

Best regards,
Sherry

Sherry Hutcheson
Sr. Regulatory Manager
United Phosphorus, Inc.
Office: 229-247-9041

From: Bohnenblust, Eric [mailto:Bohnenblust.Eric@epa.gov]
Sent: Monday, April 24, 2017 12:54 PM
To: Sherry Hutcheson <sherry.hutcheson@uniphos.com>
Cc: Walsh, Michael <Walsh.Michael@epa.gov>
Subject: label comments for 70506-GGE

Hi Sherry,

Attached please find label comments for the new product registration for 70506-GGE. Please let me know if you have any questions regarding any of the comments.

If you could, please send me a revised label by the end of the day Friday, April 28, 2017 I would greatly appreciate it.

Thanks.

Eric Bohnenblust, Ph.D
Entomologist
Invertebrate & Vertebrate Branch 2
Phone: 703-347-0426
Email: Bohnenblust.eric@epa.gov

Bohnenblust, Eric

From: Bohnenblust, Eric
Sent: Thursday, May 04, 2017 2:24 PM
To: 'Sherry Hutcheson'
Cc: Walsh, Michael
Subject: RE: label comments for 70506-GGE
Attachments: 70506-xxxxx.20170427. Zylo Insecticide clean ewbcomments.pdf

Hi Sherry,

Attached is a label with some additional comments and I have a few comments below.

A few things:

The table for the low growing berry subgroup is a copy of the table for the non-grass forage use. These tables should be different, I think based on their proximity to each other, this was a simple copy past error initially.

Strawberries are listed twice, they should only be listed once. Please delete one of the instances and make sure the table matches the table for the cited product.

Please send me an updated 8570-1 form with the section for container size indicating this product will be packaged in containers smaller and larger than 5 gallons. The current form only lists containers smaller than 5 gallons. This directly impacts the storage and disposal statements. If you only wish to have the smaller containers you should delete the storage and disposal statements for the containers larger than 5 gallons.

If you could get me a revised label by the the end of day next Wednesday I would appreciate it thanks. Please let me know if you have any questions.

Eric

From: Sherry Hutcheson [mailto:sherry.hutcheson@uniphos.com]
Sent: Friday, April 28, 2017 3:10 PM
To: Bohnenblust, Eric <Bohnenblust.Eric@epa.gov>
Cc: Walsh, Michael <Walsh.Michael@epa.gov>
Subject: RE: label comments for 70506-GGE

Eric,
Here are the marked and clean copies.
Sherry

Sherry Hutcheson
Sr. Regulatory Manager
United Phosphorus, Inc.
Office: 229-247-9041
Mobile: 229-251-7134

From: Bohnenblust, Eric [mailto:Bohnenblust.Eric@epa.gov]
Sent: Tuesday, April 25, 2017 6:52 AM
To: Sherry Hutcheson <sherry.hutcheson@uniphos.com>

Cc: Walsh, Michael <Walsh.Michael@epa.gov>
Subject: RE: label comments for 70506-GGE

Hi Sherry,

With PRIA actions we prefer to get things done as soon as possible to avoid a lot of down time, in case there are major issues with our comments, and we prefer to get things done well in advance of PRIA dates whenever possible. If you need some additional time that is not a problem just let me know approximately how much time, we are a month away from the PRIA date. However, the sooner we get this done, the sooner you have your product too.

Thanks.
Eric

From: Sherry Hutcheson [mailto:sherry.hutcheson@uniphos.com]
Sent: Monday, April 24, 2017 4:43 PM
To: Bohnenblust, Eric <Bohnenblust.Eric@epa.gov>
Cc: Walsh, Michael <Walsh.Michael@epa.gov>
Subject: RE: label comments for 70506-GGE

Good afternoon Eric,
I will do my best. Any reason for the quick turn around?

Best regards,
Sherry

Sherry Hutcheson
Sr. Regulatory Manager
United Phosphorus, Inc.
Office: 229-247-9041

From: Bohnenblust, Eric [mailto:Bohnenblust.Eric@epa.gov]
Sent: Monday, April 24, 2017 12:54 PM
To: Sherry Hutcheson <sherry.hutcheson@uniphos.com>
Cc: Walsh, Michael <Walsh.Michael@epa.gov>
Subject: label comments for 70506-GGE

Hi Sherry,

Attached please find label comments for the new product registration for 70506-GGE. Please let me know if you have any questions regarding any of the comments.

If you could, please send me a revised label by the end of the day Friday, April 28, 2017 I would greatly appreciate it.

Thanks.

Eric Bohnenblust, Ph.D
Entomologist
Invertebrate & Vertebrate Branch 2
Phone: 703-347-0426
Email: Bohnenblust.eric@epa.gov

UPL disclaimer

Bohnenblust, Eric

From: Bohnenblust, Eric
Sent: Monday, April 24, 2017 12:54 PM
To: Sherry Hutcheson
Cc: Walsh, Michael
Subject: label comments for 70506-GGE
Attachments: 70506-xxxxx.20161003.Zylo Insecticide ewb comments.pdf

Hi Sherry,

Attached please find label comments for the new product registration for 70506-GGE. Please let me know if you have any questions regarding any of the comments.

If you could, please send me a revised label by the end of the day Friday, April 28, 2017 I would greatly appreciate it.

Thanks.

Eric Bohnenblust, Ph.D
Entomologist
Invertebrate & Vertebrate Branch 2
Phone: 703-347-0426
Email: Bohnenblust.eric@epa.gov

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460
OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION
OFFICE OF PESTICIDE PROGRAMS REGISTRATION DIVISION (7505P)

DP BARCODE No.: D436832 **FILE SYMBOL No.**: 70506-GGE (screen) **DECISION No.**: 522412
PC Code: 121027 **Company Name:** United Phosphorus, Inc.
FOOD Use: Yes **ACTION CODE**: R 310 **PRODUCT NAME**: Zylo Insecticide

DATE OUT: January 23, 2017

SUBJECT: Completeness Check Screen for End-Use Product

Product Name: Zylo Insecticide

Bruce Kitchens 1/23/17

FROM: Bruce Kitchens, Chemist
Product Chemistry Team
Chemistry, Inerts and Toxicology Assessment Branch/RD (7505P)

TO: RM #10, Richard Gebken/Eric Bohnenblust
Invertebrate and Vertebrate Branch 2
Registration Division (7505P)

Company Name: United Phosphorus, Inc.
Active Ingredient: Methoxyfenozide (22.60% a.i.)

MRID Nos.: 500341-01 thru 500341-10

CONCLUSION:

Deficiencies: No
(If there are deficiencies they are indicated below each heading as Note 1, Note 2 Etc).

Group A: All required data submitted

Group B: All data required submitted.

CSF: Basic CSF dated 03 Oct 2016.

Product label: In Documentum

Note 1: The test substance was found to be incompatible with oxidizing agents. Therefore, the registrant is recommended to add the following warning on the product label under Physical-Hazards:

"Do not mix or allow contact with oxidizing agent. Hazardous Chemical reaction may occur"

Note to PM: If the deficiencies are found in the screen results, please inform the registrant and return to me the corrected deficiencies in response to 10-day letter, so that it can be attached to the original bean, if the data package is still in CITAB. New Bean is required in case the bean has been closed by CITAB. Thank you.

Varner, Stephanie

From: Sherry Hutcheson <sherry.hutcheson@uniphos.com>
Sent: Monday, October 17, 2016 12:09 PM
To: Varner, Stephanie
Subject: RE: Submission to EPA: ZYLO INSECTICIDE (EPA Reg. No. 70506-GGE)

Stephanie,
I submitted data matrices with the application. The data referenced is UPI's.
Sherry

Sherry Hutcheson
Sr. Regulatory Manager
United Phosphorus, Inc.
Office: 229-247-9041
Mobile: 229-251-7134

From: Varner, Stephanie [mailto:Varner.Stephanie@epa.gov]
Sent: Monday, October 17, 2016 11:48 AM
To: Sherry Hutcheson <sherry.hutcheson@uniphos.com>
Subject: RE: Submission to EPA: ZYLO INSECTICIDE (EPA Reg. No. 70506-GGE)

Hi Sherry.
Whenever there are studies submitted with an application, we need a citation and the matrices.
Stephanie

From: Sherry Hutcheson [mailto:sherry.hutcheson@uniphos.com]
Sent: Monday, October 17, 2016 11:45 AM
To: Varner, Stephanie <Varner.Stephanie@epa.gov>
Subject: RE: Submission to EPA: ZYLO INSECTICIDE (EPA Reg. No. 70506-GGE)

Hi Stephanie,
A little confused since this is under the formulator's exemption. Please advise how data citation applies.
Sherry

Sherry Hutcheson
Sr. Regulatory Manager
United Phosphorus, Inc.
Office: 229-247-9041
Mobile: 229-251-7134

From: Varner, Stephanie [mailto:Varner.Stephanie@epa.gov]
Sent: Monday, October 17, 2016 11:38 AM
To: Sherry Hutcheson <sherry.hutcheson@uniphos.com>
Subject: Submission to EPA: ZYLO INSECTICIDE (EPA Reg. No. 70506-GGE)

Dear Ms. Hutcheson,

My name is Stephanie Varner, and I am a contractor with the EPA. I am contacting you in regards to your submissions in support of the product ZYLO INSECTICIDE (EPA Reg. No. 70506-GGE). We have found a deficiency with the submissions that will need to be addressed:

1. Please submit a Certification with Respect to Citation of Data.

Thank you!

Stephanie Varner

Contractor, US EPA
2777 S. Crystral Drive, S-4813
Arlington, VA 22202
(703) 347-0240
Email: varner.stephanie@epa.gov

Walsh, Michael

From: Sherry Hutcheson <sherry.hutcheson@uniphos.com>
Sent: Wednesday, November 16, 2016 2:57 PM
To: Walsh, Michael
Subject: Re: 70506-GGE. Zylo Insecticide. Methoxyfenozide.
Attachments: 70506-GGE.20161116.8570-34 Citation of Data.Zylo signed.pdf

---

From: Sherry Hutcheson
Sent: Wednesday, November 16, 2016 10:03:48 AM
To: Walsh, Michael
Subject: Re: 70506-GGE. Zylo Insecticide. Methoxyfenozide.

Not sure why it wasn't attached. Will send today.
Sherry

From: Walsh, Michael <Walsh.Michael@epa.gov>
Sent: Tuesday, November 15, 2016 4:52 PM
To: Sherry Hutcheson
Subject: 70506-GGE. Zylo Insecticide. Methoxyfenozide.

Dear Ms. Hutcheson:

As required by the Pesticide Registration Handbook, please provide a Data Certification Form (EPA Form 8570-34) to accompany the Data Matrix you submitted with your new product Zylo Insecticide (70506-GGE).

If possible, please submit this required document by no later than close of business tomorrow. If you are not able to provide the document tomorrow, please let me know when you will be able to provide it. You may submit the document in a variety of ways, including through Front End Processing, by fax, or via email. Please let me know if you need a fax number.

It is important to note that RD cannot put your new product submission into review without a signed form bearing the current date.

Thank you for your prompt attention to this matter.

Michael Walsh
Product Manager 11
Invertebrate & Vertebrate Branch 2
Registration Division
Office of Pesticide Programs
U.S. EPA

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Walsh, Michael

From: Walsh, Michael
Sent: Tuesday, November 15, 2016 4:53 PM
To: 'sherry.hutcheson@uniphos.com'
Subject: 70506-GGE. Zylo Insecticide. Methoxyfenozide.

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GROUP 18 INSECTICIDE

Zylo™ INSECTICIDE

Active Ingredient:
methoxyfenozide: Benzoic acid, 3-methoxy-
2-methyl-,2-(3,5-dimethylbenzoyl)-2-
(1,1-dimethylethyl) hydrazide 22.6%

Other Ingredients: 77.4%

Total: 100.0%

Contains 2 lbs methoxyfenozide active ingredient per gallon

Keep Out of Reach of Children

CAUTION

FIRST AID	
If on skin:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes • Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency medical assistance, call the Rocky Mountain Poison Control Center at 1-866-673-6671.
For chemical emergency: spill, leak, fire, exposure or accident, call CHEMTREC at 1-800-424-9300.

NET CONTENTS: _____ gal.

United Phosphorus, Inc.
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406
1-800-438-6071

EPA Reg. No. 70506-xxxxx
EPA Est. No. _____

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION

Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls

When handlers use closed systems, enclosed cabs or aircraft in a manner that meet the requirements listed in the Worker Protection Standards (WPS) for agricultural pesticides [40 CFR 170.240(d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove contaminated clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Environmental Hazards

Drift and runoff from applications of this product may be hazardous to sensitive aquatic invertebrates in water bodies adjacent to the treatment area. For terrestrial uses, do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Methoxyfenozide can contaminate surface water through spray drift. Under some conditions, methoxyfenozide may also have a high potential for runoff into surface water (primarily via dissolution in runoff water) for several months post-application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas over-laying extremely shallow groundwater, areas with in-field canals or ditches that drain to overlaying tile drainage systems that drain to surface water.

Do not cultivate within 10 feet of aquatic areas to allow growth of a vegetative filter strip.

Do not apply by ground within 25 feet, or by air within 150 feet, of lakes, reservoirs, rivers, permanent streams, marshes, or natural ponds; estuaries and commercial fish farm ponds.

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for

Use carefully before applying.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Not for Sale, Use, or Distribution in Nassau County and Suffolk County in New York State.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, is:

- Coveralls
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Keep unprotected persons out of treated area until sprays have dried.

Storage and Disposal

Do not contaminate water, food or feed by storage and disposal.

Pesticide Storage: Store in a cool dry well-ventilated area, but not below 32°F.

Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Nonrefillable containers 5 gallons or less:

Container Handling: Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Refillable containers 5 gallons or larger:

Container Handling: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Nonrefillable containers 5 gallons or larger:

Container Handling: Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Product Information

Zylo™ insecticide has a novel mode of action that mimics the action of the molting hormone of lepidopterous larvae. Upon ingestion, larval stages of the order lepidoptera undergo an incomplete and developmentally lethal premature molt. This process interrupts and rapidly halts their feeding. Feeding typically ceases within hours of ingestion, although complete mortality of the larvae may take several days. Affected larvae often become lethargic and often develop discolored areas or bands between segments.

Because Zylo insecticide is narrow spectrum insecticide that specifically targets Lepidoptera, it is a good tool for Integrated Pest Management (IPM) programs. The selectivity of Zylo insecticide allows beneficial insects and other arthropods to function unimpeded in the management of secondary pests while Zylo insecticide provides control of troublesome lepidoptera pests. Zylo insecticide belongs to the diacylhydrazine class of insecticides.

Use Rate Determination

Please carefully read and follow all label use rates and restrictions. Always ensure aerial or ground equipment is properly calibrated before use. Prepare only the amount of spray solution required to treat the application acreage.

Use the lower rates for light infestations of the target lepidopterous species and the higher rates for moderate to heavy infestations. Zylo insecticide may be applied in either dilute or concentrate sprays so long as the application equipment is calibrated and adjusted to deliver thorough, uniform coverage. Use the specified amount of Zylo insecticide per acre regardless of the spray volume used.

Mixing Directions

Always shake well before use. Avoid freezing.

Application Rate Reference Table

Application Rate of Zylo insecticide (fl oz/acre)	Active Ingredient Equivalent (lb ai/acre)	Acres per Gallon of Zylo insecticide
4 fl oz/A	0.06 lbs ai/A	32 acres per gallon
6 fl oz/A	0.09 lbs ai/A	21 acres per gallon
8 fl oz/A	0.12 lbs ai/A	16 acres per gallon
10 fl oz/A	0.16 lbs ai/A	13 acres per gallon
12 fl oz/A	0.19 lbs ai/A	11 acres per gallon
16 fl oz/A	0.25 lbs ai/A	8 acres per gallon
24 fl oz/A	0.38 lbs ai/A	5 acres per gallon

Zylo Insecticide – When Used Alone

Mixing order when used alone.

- fill the spray tank 1/3 (one-third) to ½ (one-half) full of clean water;
- slowly pour Zylo insecticide into the spray tank;
- maintain agitation in the spray tank during mixing, loading and application;
- triple rinse empty container, and add rinsate to the spray tank.

Zylo Insecticide – When Used In A Tank Mix

Zylo insecticide is believed to be compatible with most commonly used agricultural insecticides, fungicides, growth regulators, foliar fertilizers and spray adjuvants. However, always conduct a compatibility test whenever preparing a new tank mix by mixing proportional amounts of all spray ingredients in a test jar. Shake the mixture vigorously and allow it to stand for 15 minutes. Rapid precipitation of the ingredients and failure to re-suspend when shaken indicates that the mixture is incompatible and should not be applied.

Mixing Order for Tank Mixes:

- fill the spray tank with water to ¼ (one-fourth) to 1/3 (one-third) of the required spray volume.
- start agitation.
- add different formulation types in the order indicated below, allowing time for complete dispersion and mixing after addition of each product. Allow extra dispersion and mixing time for dry flowable products.

  Add different formulation types in the following order:

  1. Water dispersible granules
  2. Wettable powders
  3. Zylo insecticide and other aqueous suspensions
- Maintain agitation and fill spray tank to ¾ (three-fourths) of total spray volume. Then add:

  4. Emulsifiable concentrates and water-based solutions
  5. Spray adjuvants
  6. Foliar fertilizers
- finish filling the spray tank.
- maintain continuous agitation during mixing, final filling and throughout application. If spraying and agitation must be stopped before the spray tank is empty, the materials may settle to the bottom. Settled materials must be re-suspended before spraying is resumed.

Application Timing

Zylo insecticide activity is expressed primarily through ingestion by the target larvae. Therefore, the timing of application is dependent upon the feeding behavior of the target pest. For cryptic (internal) feeding larvae, application must be made prior to the time that surface feeding occurs, i.e., just prior to initiation of egg hatch. For foliar or surface feeding larvae, application may be made while active feeding is occurring.

Re-application may be required to protect rapidly expanding fruit, new flushes of foliage, or for extended infestations. The re-application interval will vary depending upon how rapidly the crop is growing, the generation time of the target pest and the duration of the infestation.

Zylo insecticide is effective against all larval instars; however, it is best practice to make applications to early instars to minimize feeding damage. For best results, begin applications when threshold levels of moths, eggs or larvae occur. Consult the Cooperative Extension Service, or other qualified professional authorities, to determine the appropriate threshold and timing for application in your area.

Application Directions

Applications must be in a manner that assures uniform and thorough coverage as Zylo insecticide must be ingested by insect larvae to be fully effective. Higher water volume and increased spray pressure generally provide better coverage.

Spray Drift Management

Adhere to the following buffer zones when applying this product near aquatic habitats (such as lakes, reservoirs, rivers, permanent streams, marshes, or natural ponds; estuaries and commercial fish farm ponds):

Application Method	Buffer Zone (feet)
ground boom	25
overhead chemigation	25
airblast	25
aerial	150

Wind: Only apply this product if the wind direction favors on-target deposition. Do not apply when the wind speed exceeds 10 mph.

Temperature Inversions: Do not make ground or aerial applications during a temperature inversion. Temperature inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

Droplet Size: Use only medium or coarser spray nozzles (for ground and non-ULV aerial application) according to ASABE (S572.1) definition for standard nozzles. In conditions of low humidity and high temperatures, use a coarser droplet size except where indicated for specific crops.

Ground Application

To avoid drift and achieve maximum performance of this product, make ground applications when the wind speed favors on-target product depositions (3 to 10 mph). Wind speed must be measured adjacent to the application site on the upwind side immediately prior to application. Do not apply when wind speed exceeds 10 mph. For groundboom applications, apply using a nozzle height of no more than 4 feet above the ground or crop canopy. Shut off the sprayer when turning at row ends. Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind directions are toward the aquatic area.

Airblast Sprayer: When using an airblast sprayer, coverage is also improved by operation of the sprayer at ground speeds that assure that the air volume within the tree canopy is completely replaced by the output from the airblast sprayer. Making applications in an alternate row middle pattern may result in less than satisfactory coverage and poor performance in conditions of high pest infestation levels, extremely large trees and/or dense foliage. For airblast applications, turn off outward pointing nozzles at row ends and when spraying the outer two rows. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy.

Chemigation Application

Zylo insecticide may be applied to cranberries and ornamentals through sprinkler irrigation equipment. Do not apply this product by chemigation unless specified in crop-specific directions in this label or supplemental labeling.

General Directions for Chemigation: Apply through a properly calibrated chemigation system that has the appropriate back flow prevention devices. See the Mixing section of the product label for specific mixing and dilution instructions. Apply Zylo insecticide in dedicated chemigation cycles only, not as a part of a regular irrigation cycle. Do not exceed 900 gallons of water per acre application volume using just enough water to thoroughly wet the plants but not the soil. Use minimum volume for flushout to avoid diluting or rinsing off product. Washout time should not exceed six (6) minutes. Set sprinkler heads in a spacing not exceeding 50 feet by 60 feet and adjusted to provide 100% overlap.

Apply Zylo insecticide only through solid-set sprinkler systems designed specifically for chemigation. Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label prescribed safety devices for public water systems are in place. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

- Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
- Chemigation systems connected to public water systems must contain a functional reduced-pressure zone (RPZ), back flow preventer or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow.

- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must contain a functional, normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems not connected to a public water supply must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located in the irrigation pipeline to prevent water source contamination from back flow.
- Systems must use a positive displacement, metering injection pump (e.g., diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Do not apply when wind speed favors drift beyond the area intended for treatment.
- If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Aerial Application

Mount the spray boom on the aircraft so as to minimize drift caused by wing tip or rotor vortices. Use the minimum practical boom length and do not exceed 75% of the wing span or 80% of the rotor diameter. Flight speed and nozzle orientation must be considered in determining droplet size. Spray must be released at the lowest height consistent with pest control and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety. When applications are made with a crosswind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.

Rainfastness

As soon as dry. However, efficacy or residual will be reduced with exposure to rainfall or overhead irrigation.

Spray Adjuvants

The addition of agricultural adjuvants to sprays of Zylo insecticide may improve initial spray deposits, redistribution and weather ability. Select adjuvants that are recommended and registered for your specific use pattern and follow their use directions. For adjuvants, it is recommended you use of a Chemical Producers and Distributors Association certified adjuvant. Always add adjuvants last in the mixing process.

Insecticide Resistance Management

Zylo insecticide is a Group 18 insecticide. Insect/mite biotypes with acquired resistance to Group 18 may eventually dominate the insect/mite population if Group 18 insecticides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of this product or other Group 18 insecticides.

To delay development of insecticide resistance, the following practices are recommended:

- Avoid consecutive use of insecticides on succeeding generations with the same mode of action (same insecticide group) on the same insect species.
- Consider tank mixtures or premix products containing insecticides with different modes of action (different insecticide groups) provided the products are registered for the intended use.
- Plan a comprehensive IPM program.
- Monitor treated insect populations in the field for loss of effectiveness.
- Do not treat seedling plants grown for transplant in greenhouses, shade houses, or field plots.
- Contact your local extension specialist, certified crop advisor, and/or manufacturer for insecticide resistance management and/or IPM recommendations for the specific site and resistant pest problems.

Endangered Species

The following applies to use of this product in Michigan (Allegan, Monroe, Montcalm, Muskegon, Newaygo, or Oceana counties) or Wisconsin (Adams, Burnett, Chippewa, Clark, Door, Eau Claire, Green Lake, Jackson, Juneau, Marquette, Monroe, Polk, Portage, Waupaca, Waushara, or Wood counties). This product may have effects on endangered species. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the county in which you are applying the product. To obtain Bulletins, no more than six months before using this product, consult http://www.epa.gov/espp/ or call 1-800-447-3813. You must use the Bulletin valid for the month in which you will apply the product.

Rotational Crop Restrictions

Following the final application of Zylo insecticide at labeled rates for registered crop uses, the following rotational crops may be planted at intervals defined below.

Crop	Re-Planting Interval
Registered crop uses	no restrictions
All other crops grown for food or feed	7 days

Note: Always refer to rotational restrictions and precautions of the most restrictive rotational guidelines when Zylo insecticide is used in a tank mix.

Use Instructions

Bushberries (Subgroup 13-07B)[1], Aronia Berry, Buffalo Currant, Chilean Guava, European Barberry, Highbush Cranberry, Honeysuckle, Jostaberry, Juneberry, Lingonberry, Native Currant, Salal, Sea Buckthorn, and Cultivars and/or Hybrids of Each

(Not registered for use in New York)

[1]Bushberries (subgroup 13-07B) including black currant, elderberry, gooseberry, highbush blueberry, huckleberry, lowbush blueberry, red currant.

Ground Application: Apply in a minimum of 30 gallons per acre (gpa) by conventional ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
cherry fruitworm cranberry fruitworm	10 – 16 fl oz/A (0.16-0.25 lb ai/A	Apply at initiation of egg laying [approximately 400 Day Degrees (DD) base 50°F] following biofix1. Make a second application at 100% petal fall (usually 7 to 14 days following the first application). An additional application (third) no sooner than 7 days following the second application may be required under high pressure or sustained moth flight.	• Do not apply more than a total of 48 fl oz (0.75 lb ai) per acre per year. • Do not make more than 3 applications per year. • **Minimum Re-treatment Interval:** 7 days • **PHI:** 7 days. • See Rotational Crop Restrictions.
European grapevine moth light brown apple moth obliquebanded leafroller		**Spring (overwintering) generation:** Make one or two applications at bloom to petal fall to small larvae when threshold levels occur. **Summer generation:** Begin applications at peak moth flight (200 to 300 DD base 43°F) following biofix. An additional application (third) no sooner than 7 days following the second application may be required under high pressure or sustained moth flight.	
redbanded leafroller variegated leafroller		For control of other leafrollers, apply at early egg hatch for each generation. Make the first application before webbing and sheltering begins. Make a second application to ensure complete coverage of rapidly expanding fruits or foliage.	
spanworm		Apply when first signs of feeding damage appear or when infestations reach threshold levels as defined by cooperative extension service or other qualified professional authorities	
green fruitworm		Apply when larvae are first detected in the clusters or when infestations reach threshold levels as defined by cooperative extension service or other qualified professional authorities.	
armyworm cutworm	8 – 16 fl oz/A (0.12–0.25 lb ai/A)	Apply when first signs of feeding damage appear or when infestations reach threshold levels as defined by cooperative extension service or other qualified professional authorities.	
gypsy moth	4 – 8 fl oz/A (0.06–0.12 lb ai/A)	Apply to early instars (1st, 2nd, or 3rd) at first signs of infestation.	

[1]Biofix is defined as first sustained adult catch in pheromone traps, typically five moths in three traps within a 7-day period. Consult state extension specialists or other qualified authorities for specific information regarding number, placement and management of pheromone traps.

Caneberries (Subgroup 13-07A)[1]

(Not registered for use in New York)

[1]Caneberries (subgroup 13-07A) including bababerry, bingleberry, blackberry, blackcap, black raspberry, black satin berry, boysenberry, caneberry, Cherokee blackberry, chesterberry, Cheyenne blackberry, coryberry, darrowberry, dewberry, dirksen thornless berry, framboise, frambueso, Himalayaberry, himbeere, hullberry, keriberry, lavacaberry, loganberry, lowberry, lucretiaberry, mammoth blackberry, marionberry, mayberry, nectarberry, olallieberry, Oregon evergreen berry, phenomenalberry, rangerberry, ravenberry, red raspberry, rossberry, Shawnee blackberry, thimbleberry, tulaeen, yellow raspberry, youngberry, cultivars, varieties, and/or hybrids of these.

Ground Application: Apply in a minimum of 30 gallons per acre by conventional ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gallons per acre. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
cherry fruitworm cranberry fruitworm	10 – 16 fl oz/A (0.16-0.25 lbs ai/A)	Apply at initiation of egg laying [approximately 400 Day Degrees (DD) base 50°F] following biofix1. Make a second application at 100% petal fall (usually 7 to 14 days following the first application). An additional application (third) no sooner than 7 days following the second application may be required under high pressure or sustained moth flight.	• Do not apply more than 16 fl oz per acre per application or more than a total of 48 fl oz (0.75 lb ai)per acre per year . Do not make more than 3 applications per year. • **Minimum Re-treatment Interval:** 7 days • **PHI:** 3 days. • See Rotational Crop Restrictions.
light brown apple moth obliquebanded leafroller		**Spring (overwintering) generation:** Make one or two applications at bloom to petal fall to small larvae when threshold levels occur. **Summer generation:** Begin applications at peak moth flight (200 to 300 DD base 43°F) following biofix. An additional application (third) no sooner than 7 days following the second application may be required under high pressure or sustained moth flight.	
redbanded leafroller variegated leafroller		For control of other leafrollers, apply at early egg hatch for each generation. Make the first application before webbing and sheltering begins. Make a second application to ensure complete coverage of rapidly expanding fruits or foliage.	

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
spanworm	10 – 16 fl oz/A (0.16-0.25 lbs ai/A)	Apply when first signs of feeding damage appear or when infestations reach threshold levels as defined by cooperative extension service or other qualified professional authorities	• Do not apply more than 16 fl oz per acre per application or more than a total of 48 fl oz (0.75 lb ai) per acre per year . Do not make more than 3 applications per year. • **Minimum Re-treatment Interval:** 7 days • **PHI:** 3 days. • See Rotational Crop Restrictions.
green fruitworm		Apply when larvae are first detected in the clusters or when infestations reach threshold levels as defined by cooperative extension service or other qualified professional authorities.	
armyworm cutworm	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A)	Apply when first signs of feeding damage appear or when infestations reach threshold levels as defined by cooperative extension service or other qualified professional authorities.	
gypsy moth	4 – 8 fl oz/A (0.06 – 0.12 lbs ai/A	Apply to early instars (1st, 2nd, or 3rd) at first signs of infestation.	

[1]Biofix is defined as first sustained adult catch in pheromone traps, typically five moths in three traps within a 7-day period. Consult state extension specialists or other qualified authorities for specific information regarding number, placement and management of pheromone traps.

Cilantro Leaves, Brassica (Cole) Leafy Vegetables (Crop Group 5)[1], Leafy Vegetables (Crop Group 4)[2], Leaves of Root and Tuber Vegetables (Crop Group 2)[3], and Turnip Greens

(Not registered for use in New York)

[1]Brassica (cole) leafy vegetables (crop group 5) including broccoli, broccoli raab, Brussels sprouts, cabbage, cauliflower, cavalo broccoli, Chinese broccoli, Chinese cabbage (bok choy, napa), Chinese mustard cabbage (gai choy), collards, kale, kohlrabi, mizuna, mustard greens, mustard spinach, rape greens.

[2]Leafy vegetables (except Brassica) (crop group 4) including amaranth, arugula, cardoon, celery, celtuce, chervil, Chinese celery, corn salad, dandelion, dock, edible-leaved chrysanthemum, endive (escarole), florence fennel, garden cress, garden purslane, garland chrysanthemum, lettuce (head, leaf), New Zealand spinach, orach, parsley, radicchio, rhubarb, spinach, Swiss chard, upland cress, vine spinach, winter purslane.

[3]Leaves of root and tuber vegetables (crop group 2) including bitter cassava, black salsify, carrot, celeriac, chicory, dasheen, edible burdock, garden beet, parsnip, oriental radish, radish, rutabaga, sugarbeet, sweet cassava, sweet potato, tanier, true yam, turnip, and turnip-rooted chervil.

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
beet armyworm cabbage looper cutworms (suppression only) fall armyworm garden webworm imported cabbageworm southern armyworm true armyworm yellowstriped armyworm	4 – 8 fl oz/A (0.06–0.12 lbs ai/A)	For early season applications only to young crops and small plants. Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.	• Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 1 day. • See Rotational Crop Restrictions.
beet armyworm cabbage looper cabbage webworm cross-striped cabbageworm cutworms (suppression only) fall armyworm garden webworm imported cabbageworm southern armyworm true armyworm yellowstriped armyworm	8 – 10 fl oz/A (0.12–0.16 lbs ai/A	For mid- to late-season applications, heavier infestations, and under conditions in which thorough coverage is more difficult. For heavy infestations, continuous moth flights, and/or egg masses and larvae in all stages of development, a 10- to 14- day re-treatment interval is required to protect new growth until moth flights and/or hits subside.	
diamondback moth (suppression only)	12 – 16 fl oz/A (0.19–0.25 lbs ai/A)	Infestations and crop damage are reduced when applied at initiation of egg laying.	

Citrus Fruits (Crop Group 10-10)[1]
(Not registered for use in New York)

[1]Citrus fruits (crop group 10-10) including Australian desert lime, Australian finger lime, Australian round lime, brown river finger lime, calamondin, citron, citrus hybrids, grapefruit, Japanese summer grapefruit, kumquat, lemon, lime, Mediterranean mandarin, mount white lime, New Guinea wild lime, pummelo, russell river lime, satsuma mandarin, sour orange, sweet lime, sweet orange, tachibana orange, Tahiti lime, tangelo, tangerine (Mandarin), tangor, trifoliate orange, uniq fruit, cultivars, varieties and/or hybrids of these.

Ground Application: Apply a minimum of 50 gallons per acre by conventional ground equipment to trellised trees or trees 10 feet tall or less. For trees more than 10 feet tall, use a minimum of 100 gallons per acre. For low volume applications, apply a minimum of 20 gallons per acre by ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Optimum results are achieved when higher spray volumes are used. Calibrate equipment to the desired spray volume. When using a new application method or product for the first time, treat a small area before applying to larger areas.

Resistance Management: To reduce the potential for resistance development in target pest species, do not make more than 3 consecutive applications of Zylo insecticide. If additional treatments are required after two consecutive applications, rotate to another class of effective insecticide of alternate modes of action for at least two applications and utilize Integrated Pest Management practices such as routine monitoring, treatment thresholds to time applications, and cultural and biological controls whenever possible. Consult your extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
citrus leafminer citrus peelminer cutworms leafrollers orange dog worm	8 – 16 fl oz/A (0.12–0.25 lbs ai/A)	Apply at the first observation of the pests on the flushing leaves. Reapply no sooner than 14-day intervals.	• Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • PHI: 1 day.

Corn (Field, Sweet, Seed)
(Not registered for use in New York)

Specific Use Directions-Field Corn:

Ground Application: Apply in a minimum of 5 gpa by conventional ground equipment to young crop or small plants. Higher carrier volumes may be required to provide thorough coverage to larger, more mature crop. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 5 gpa. Use sufficient carrier volume to provide thorough, uniform coverage.

Specific Use Directions-Sweet Corn:

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa after initiation of tasseling. Calibrate equipment and spray volume to assure uniform coverage of infested parts of the crop.

Aerial Application: Apply in a minimum of 10 gpa.

Pests	Application Rate	Application Timing	Restrictions

	(fl oz/acre)		
European corn borer southwestern corn borer sugarcane borer	4 – 16 fl oz/A (0.06 – 0.25 lbs ai/A)	Apply at first sign of egg hatch or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities. Direct application at the whorl for early season (first generation) infestations. Apply as broadcast or multinozzle over the row application to mid- and late season infestations.	• Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI-Field Corn:** 21 days. • **PHI-Sweet Corn:** 3 days of harvest for ears and/or green chop (forage); and 21 days of harvest for dry fodder. • See Rotational Crop Restrictions.
true armyworm western bean cutworm	4 – 16 fl oz/A (0.06 – 0.25 lbs ai/A)	Apply at first sign of egg hatch (field corn), feeding damage (sweet corn), or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities. Under heavy infestations, continuous moth flights, or rapid crop growth and development, reapply at 5- to 10-day re-treatment interval.	

Cotton

(Not registered for use in New York)

Ground Application: Make applications by conventional ground sprayers which are calibrated to deliver a minimum of 5 gpa.

Aerial Application: Apply in a minimum of 3 gpa. Use a higher carrier volume or heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
beet armyworm cabbage looper cotton leafworm cotton leaf perforator fall armyworm1 saltmarsh caterpillar southern armyworm soybean looper true armyworm yellowstriped armyworm	4 – 10 fl oz/A (0.06 - 0.16 lbs ai/A)	Apply at egg hatch or when first signs of feeding occur. Use a higher rate for heavier infestations and under conditions in which thorough coverage is more difficult (most fall armyworm). Under heavy infestations, continuous moth flights and/or egg masses and larvae in all stages of development, a 10- to 14- day re-treatment interval is required to protect new growth until moth flights and/or hits subside.	• Do not apply more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 14 days.

[1]Suppression only. Use a higher rate in the rate range and ensure thorough coverage. Tank mixing Zylo insecticide with other products registered for fall armyworm control in cotton (e.g., pyrethroids, or others) has been shown to improve control. Consult your extension service specialist, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Cranberry

(Not registered for use in New York)

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa.

Chemigation Application: Zylo insecticide may be applied through sprinkler irrigation systems to control listed pests. Use specified broadcast application rates. See Chemigation Application section.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
blackheaded fireworm gypsy moth *sparganothis* fruitworm spanworms spotted fireworm	10 – 16 fl oz/A (0.16 – 0.25 lbs ai/A)	**Spring (overwintering) generation:** Make 1 to 2 applications during the flower bud development period depending upon infestation level. **Summer generation:** Make the first application during the period of peak egg lay to early egg hatch. Reapply 10 to 18 days later. A higher rate in the rate range and additional applications at 10- to 18-day intervals may be required for heavy infestations, sustained moth flight, situations in which it is difficult to achieve thorough coverage, and for quicker knockdown of larvae. For control of light to moderate infestations, begin applications before egg hatch of each generation and before the larvae penetrate the fruit. The product provides 10 to 18 days of protection depending upon application rate and how rapidly fruit is expanding.	• Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 14 days.

Cucurbit Vegetables (Crop Group 9)[1]

(Not registered for use in New York)

[1]Cucurbit vegetables (crop group 9) including balsam apple, balsam pear, bitter melon, chayote (fruit), Chinese cucumber, Chinese waxgourd (Chinese preserving melon), citron melon, cucumber, edible gourd (including Chinese okra, cucuzza, hechima, hyotan), gherkin, muskmelon (including cantaloupe, casaba, crenshaw melon, golden pershaw melon, honey balls, honeydew melon, mango melon, persian melon, pineapple melon, santa claus melon, snake melon, true cantaloupe), pumpkin, summer squash (including crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini), winter squash (including acorn squash, butternut squash, calabaza, hubbard squash, spaghetti squash), watermelon.

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
beet armyworm cabbage looper melon worm pickle worm rind worm southern armyworm true armyworm yellowstriped armyworm	4 – 10 fl oz/A (0.06 – 0.16 lbs ai/A)	Apply at first sign of infestation, targeting eggs and small larvae, or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.	• Do not apply more than a total of 64 fl oz (1 lb ai) per acre per year. • Do not make more than 4 applications per acre per year. • **Minimum Re-treatment Interval:** 7 days • **PHI:** 3 days. • See Rotational Crop Restrictions.

Dates

(Not registered for use in New York)

Ground Application: Apply a minimum of 100 gallons per acre. Equipment and spray volume should be calibrated to assure uniform coverage of infested parts of the crop.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
carob moth	10 – 20 fl oz/A (0.16 – 0.31 lbs ai/A)	For control of light to moderate infestations, begin applications before egg hatch of each generation and before the larvae penetrate the fruit. Once applied, the product provides 10 to 18 days of protection depending upon application rate and how rapidly fruit is expanding. Consult local spray timing advisories or follow biofix dates based on pheromone trap catches to time sprays appropriately. For continuous moth flight and egg laying, use the highest labeled rate. Maintain coverage on the fruit surface with 10- to 18-day retreatment intervals. Alternate or intersperse with other	• Do not apply more than 20 fl oz per acre per application or a total of 64 fl oz (1 lb ai) per acre per year. • Do not make more than 3 applications per acre per year. • **Minimum Re-treatment Interval:** 10 days • **PHI:** 7 days.

		insecticides with different modes of action targeted for the same pest so long as the re-treatment interval does not exceed the period of effectiveness of the products being alternated and Zylo insecticide is applied before larvae penetrate the fruit.	

Fruiting Vegetables (Crop Group 8-10)[1]

(Not registered for use in New York)

[1]Fruiting vegetables (crop group 8-10) including African eggplant, bell pepper, bush tomato, cocona, currant tomato, eggplant, garden huckleberry, goji berry, groundcherry, hot pepper, martynia, naranjilla, nonbell pepper, okra, pea eggplant, pepino, pimento pepper, roselle, scarlet eggplant, sunberry, sweet pepper, tomatillo, tomato, tree tomato, cultivars, varieties and/or hybrids of these.

Ground Application: Apply in a minimum of 10 gallons per acre by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gallons per acre to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gallons per acre.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
beet armyworm cabbage looper European corn borer fall armyworm southern armyworm tomato hornworm true armyworm yellowstriped armyworm western yellowstriped armyworm	4 – 8 fl oz/A (0.06 – 0.12 lbs ai/A)	For early season applications only to young crops and small plants. Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.	• Do not apply more than 16 fl oz per acre per application or a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 1 day. • See Rotational Crop Restrictions.
	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A	For mid- to late-season applications, heavier infestations, and under conditions in which thorough coverage is more difficult. For heavy infestations, continuous moth flights, and/or egg masses and larvae in all stages of development, a 7- to 14-day re-treatment interval is required to protect new growth until moth flights and/or larval infestations subside.	
tomato fruitworm (suppression only)	10 – 16 fl oz/A (0.16 – 0.25 lbs ai/A)	Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities. May provide partial control when infestations reach high levels.	
tomato pinworm (suppression only)	10 – 16 fl oz/A (0.16 – 0.25 lbs ai/A)	Leafmining and infestations of leafmining phase are reduced when applied at initiation of egg laying.	

Globe Artichoke

(Not registered for use in New York)

Ground Application: Apply in a minimum of 75 gpa of water using calibrated ground application equipment that provides thorough coverage.

Aerial Application: Apply in a minimum of 10 gpa of water. Use higher water volumes for heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworm plume moth	4 – 16 fl oz/A (0.06 – 0.25 lbs ai/A)	Apply at egg hatch or when first signs of feeding occur. Use a higher rate for heavier infestations and under conditions in which thorough coverage is more difficult. Under conditions of heavy infestations, continuous moth flights and/or egg masses and larvae in all stages of development, reapply Zylo insecticide or another effective product at a minimum application interval of 7 days to protect new growth until moth flights subside.	• Do not apply more than a total of 64 fl oz (1 lb ai) per acre per year. • Do not make more than 4 applications per year. • **PHI:** 4 days.

Grape

(Not registered for use in New York)

Ground Application: Apply in a minimum of 40 gpa by conventional airblast or over the row sprayer. If using other type of sprayer, apply in sufficient carrier volume to ensure thorough, uniform cover of the crop. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 20 gpa. This method should not be used if the density of the foliage prohibits thorough, uniform coverage of the entire vine canopy.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
grape berry moth	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A)	For internal feeding lepidoptera larvae, apply at initiation of egg hatch for each generation. Reapply within 10 to 18 days to ensure complete coverage of rapidly expanding fruits or foliage.	• Do not apply more than 16 fl oz per acre per application or more than a total of 48 fl oz (0.75 lb ai) per acre per year. • **PHI:** 30 days.
European grapevine moth grape leaf folder light brown apple moth omnivorous leafroller obliquebanded leafroller orange tortrix redbanded leafroller		**Spring generation:** Apply at first sign of larval infestation or to small larvae when threshold levels occur. **Summer generation:** For each generation, apply at first egg hatch. Reapply at 10- to 14-day intervals under high pressure or sustained moth flight.	

Grass Forage, Fodder, and Hay (Crop Group 17)

(Not registered for use in New York)

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 5 gpa. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworms	4 – 8 fl oz/A (0.06 - 0.12 lbs ai/A	Begin applications when first signs of feeding damage appear or when threshold levels of feeding damage occur. Use a higher rate for heavier infestations and under conditions in which thorough coverage is more difficult.	• Do not apply more than a total of 32 fl oz (0.5 lb ai) per acre per year. • Do not make more than 1 application cutting. • **PHI-Hay:** 7 days. • **PHI-Forage:** 0 days. Livestock can enter and graze on treated area immediately after application. • See Rotational Crop Restrictions.

Green Onion (Subgroup 3-07B)[1], except chive (fresh leaves)

(Not registered for use in New York)

[1]Green onion (subgroup 3-07B) including beltsville bunching onion, Chinese chive (fresh leaves), elegans hosta, fresh onion, fritillaria leaves, green onion, kurrat, lady's leek, leek, macrostem onion, shallot (fresh leaves), tree onion (tops), wild leek.

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate

equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
lepidopteran larvae including: armyworms European corn borer loopers	4 – 8 fl oz/A (0.06 – 0.12 lbs ai/A	For early season applications only to young crops and small plants. Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.	• Do not apply more than 12 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • Do not make more than 6 applications per acre per year. • **PHI**: 1 day. • See Rotational Crop Restrictions.
	8 – 12 fl oz/A (0.12 – 0.19 lb ai/A	For mid- to late-season applications, heavier infestations, and under conditions in which thorough coverage is more difficult. For heavy infestations, continuous moth flights, and/or egg masses and larvae in all stages of development, reapplication can be made at a minimum 10-day re-treatment interval to protect new growth until moth flights and/or hits subside.	

Herbs (Fresh and Dried) (Subgroup 19A)[1]

(Not registered for use in New York)

[1]Herbs (fresh and dried) (subgroup 19A) including angelica, annual marjoram, balm, basil, borage, burnet, camomile, catnip, chervil (dried), chive, coriander (leaf), costmary, culantro (leaf), curry (leaf), dillweed, horehound, hyssop, lavender, lemongrass, lovage (leaf), marigold, marjoram, nasturtium, oregano, parsley (dried), pennyroyal, pot marjoram, rosemary, rue, sage, summer savory, sweet bay, sweet marjoram, tansy, tarragon, thyme, wild marjoram, wintergreen, winter savory, woodruff, wormwood.

Ground Application: Apply in a minimum of 10 gallons per acre by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gallons per acre to densely foliated or difficult to cover crops to

ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gallons per acre.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
beet armyworm cabbage looper cutworms (suppression only) fall armyworm garden webworm imported cabbageworm southern armyworm true armyworm yellowstriped armyworm	4 – 8 fl oz/A (0.06 – 0.12 lbs ai/A	For early season applications only to young crops and small plants. Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.	• Do not apply more than 16 fl oz per acre per application or a total of 64 fl oz (1 lb ai) per acre per year. • **Minimum Re-treatment Interval:** 10 days • See Rotational Crop Restrictions. . **PHI:** 1 day.
beet armyworm cabbage looper cabbage webworm cross-striped cabbageworm cutworms (suppression only) fall armyworm garden webworm imported cabbageworm southern armyworm true armyworm yellowstriped armyworm	8 – 10 fl oz/A (0.12 – 0.16 lbs ai/A)	For mid- to late-season applications, heavier infestations, and under conditions in which thorough coverage is more difficult. For heavy infestations, continuous moth flights, and/or egg masses and larvae in all stages of development, a 10- to 14- day re-treatment interval is required to protect new growth until moth flights and/or hits subside.	
diamondback moth (suppression only)	12 – 16 fl oz/A (0.19 – 0.25 lbs ai/A)	Infestations and crop damage are reduced when applied at initiation of egg laying.	

Legume Vegetables (Succulent or Dried) (Crop Group 6)[1] and Foliage of Legume Vegetables (Except Soybean) (Subgroup 7A)[2]

(Not registered for use in New York)

[1]Legume vegetables (succulent or dried) (crop group 6) including asparagus bean, blackeyed pea, Cajanus spp. (pigeon pea), Chinese longbean, Cicer arietinum (chick peas, garbanzo beans), cowpea, green lima bean, jackbean, Lens spp. (lentils), Lupinus spp. (grain lupine, sweet lupine, white lupine, white sweet lupine), moth bean, Phaseolus spp. (kidney beans, lima beans, mung beans, navy beans, pinto beans, snap beans, waxbeans), Pisum spp. (dwarf pea, edible-pod pea, English pea, field pea, garden pea, green pea), runner bean, snap bean, snow pea, soybean (immature seed), southern pea, succulent broad bean, sugar snap pea, sword bean, Vicia faba (broad beans, fava beans); Vigna spp. (asparagus beans, blackeyed pea, cowpeas), wax bean, yardlong bean.

oliage of legume vegetables (except soybean) (subgroup 7A) including any cultivar of bean and field pea (except soybean).

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

Resistance Management: To reduce the potential for resistance development in target pest species, do not make more than two consecutive applications of Zylo insecticide. If additional treatments are required after two consecutive applications of Zylo insecticide, rotate to another class of effective insecticides for at least one application and utilize Integrated Pest Management practices such as routine monitoring, treatment thresholds to time applications, and cultural and biological controls whenever possible. Consult your extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
alfalfa looper beet armyworm cabbage looper European corn borer fall armyworm southern armyworm tomato hornworm true armyworm yellowstriped armyworm western yellowstriped armyworm	4 – 8 fl oz/A (0.06 – 0.12 lbs ai/A	For early season applications only to young crops and small plants. Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities.	• Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • Do not make more than 4 applications per acre per year. • **Minimum Re-treatment Interval:** 7 days • Do not use adjuvants in the tank mix when applying this product to dry peas and beans. • Do not apply to dry peas by aerial ULV. • See Rotational Crop Restrictions. • **PHI:** 7 days.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
alfalfa looper beet armyworm cabbage looper European corn borer fall armyworm southern armyworm tomato hornworm true armyworm yellowstriped armyworm western yellowstriped armyworm	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A)	For mid- to late-season applications, heavier infestations, and under conditions in which thorough coverage is more difficult. For heavy infestations, continuous moth flights, and/or egg masses and larvae in all stages of development, a 7- to 14-day re-treatment interval is required to protect new growth until moth flights and/or larval infestations subside.	• Do not use adjuvants in the tank mix when applying this product to dry peas and beans. • Do not apply to dry peas by aerial ULV. • Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • Do not make more than 4 applications per acre per year. • **Minimum Re-treatment Interval:** 7 days • **PHI:** 7 days. • See Rotational Crop Restrictions.
corn earworm (*Heliocoverpa/ Heliothis*) (suppression only)	10 – 16 fl oz/A (0.16 – 0.25 lbs aiA)	Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities. May provide partial control when infestations reach high levels.	
tomato pinworm (suppression only)		Leafmining and infestations of leafmining phase are reduced when applied at initiation of egg laying.	

Low Growing Berry (Except Cranberry) (Crop Group 13-07G)[1]

(Not registered for use in New York)

[1]Low growing berry (except cranberry) (crop group 13-07G) including bearberry, bilberry, cloudberry, lingonberry, lowbush blueberry, muntries, partridgeberry, strawberry, cultivars, varieties, and/or hybrids of these.

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 5 gpa. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworms, including beet fall southern striped true western yellowstriped alfalfa caterpillar alfalfa looper webworms	4 – 8 fl oz/A (0.06 - 0.12 lbs ai/A)	Begin applications when first signs of feeding damage appear or when threshold levels of feeding damage occur. Use a higher rate for heavier infestations and under conditions in which thorough coverage is more difficult.	• Do not apply more than a total of 32 fl oz (0.5 lb ai) per acre per year. • Do not make more than 1 application per cutting. • **PHI-Hay:** 7 days. • **PHI-Forage:** 0 days. Livestock can enter and graze on treated area immediately after application. • See Rotational Crop Restrictions.

Nongrass Forage, Fodder, Straw and Hay (Crop Group 18)[1]

(Not registered for use in New York)

[1]Nongrass forage, fodder, straw and hay (crop group 18) including alfalfa, clover, crown vetch, kudzu, lespedeza, lupin, milk vetch, sainfoin, trefoil, velvet bean, vetch.

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 5 gpa. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworms, including beet fall southern striped true western yellowstriped alfalfa caterpillar alfalfa looper webworms	4 – 8 fl oz/A (0.06 - 0.12 lbs ai/A)	Begin applications when first signs of feeding damage appear or when threshold levels of feeding damage occur. Use a higher rate for heavier infestations and under conditions in which thorough coverage is more difficult.	• Do not apply more than a total of 32 fl oz (0.5 lb ai) per acre per year. • Do not make more than 1 application per cutting. • **PHI-Hay:** 7 days. • **PHI-Forage:** 0 days. Livestock can enter and graze on treated area immediately after application. • Livestock can enter and graze on treated area immediately after application. • See Rotational Crop Restrictions.

Ornamentals

(Not registered for use in New York)

Zylo insecticide controls the listed pests on trees; shrubs; foliage plants and flowers grown in commercial nurseries and greenhouses, in Christmas tree farms, in outdoor landscape areas such as parks, recreational areas, institutional grounds, residential property, etc., and in interior plantscapes. When applied as directed, Zylo insecticide has shown excellent selectivity on a wide range of ornamental plants. It is impossible, however, to evaluate this product on all ornamentals or under all possible growing conditions. The user should exercise reasonable judgment and caution with this product; until familiar with results under user growing conditions, treat a limited number of plants.

Ground Application: Apply in a minimum of 50 gpa by conventional ground equipment or hydraulic sprayers. Apply in a minimum of 10 gpa by mist blowers or air blast sprayers. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Hand Sprayers: Apply in enough water to thoroughly spray plant foliage until runoff.

Zylo insecticide (fl oz/acre)	Active Ingredient (lb ai/acre)	Equivalent Zylo insecticide in 1 Gallon of Water (Teaspoon)
4 fl oz/A	0.06 lbs ai/A	¼ teaspoon
8 fl oz/A	0.12 lbs ai/A	½ teaspoon
16 fl oz/A	0.25 lbs ai/A	1 teaspoon

Aerial Application: Apply in a minimum of 20 gpa. Zylo insecticide can be aerially applied when conditions warrant. However, this method should not be used if the size of the tree or density of the foliage prohibits thorough, uniform coverage of the entire tree canopy. Do not make aerial applications in immediate proximity of residential, commercial, government, institutional or other structures where people may be present including homes, apartments, offices, churches, schools, and businesses. Aerial applicators should evaluate conditions existing at the time of application and make appropriate adjustments to reduce drift. In urban areas, however, use is limited to directed ground or chemical applications.

Chemigation Application:Zylo insecticide may be applied through sprinkler irrigation systems to control listed pests. Use specified broadcast application rates. See Chemigation Application section.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworm bagworms beet armyworm browntail moth codling moth cutworms eastern tent caterpillar elm spanworm eucalyptus caterpillar European grapevine moth fall armyworm fall cankerworm fall webworm Florida fern caterpillar forest tent caterpillar gypsy moth hemlock looper jack pine budworm leafrollers light brown apple moth pine tip moth processionary caterpillar puss caterpillar spruce budworm tussock moth western spruce budworm western tent caterpillar yellowneck caterpillar zimmerman pine moth	4 – 16 fl oz/A (0.06 – 0.25 lbs ai/A	Begin applications when larvae are observed or at the first sign of feeding damage. Repeat applications on a 10- to 14-day interval or as necessary based upon pest reinfestation. Uniform coverage of the foliage is essential to provide maximum protection from defoliation and reduction of egg mass deposition.	• Do not apply more than a total of 32 fl oz (0.5 lb ai) per acre per year. • Do not make more than 4 applications per acre per year. • Allow at least six hours between application completion and onset of precipitation to assure thorough spray drying.

Peanut

(Not registered for use in New York)

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 5 gpa. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworms cabbage looper green clover worm saltmarsh caterpillar soybean loopers velvet bean caterpillar	6 – 10 fl oz/A (0.09 - 0.16 lbs ai/A	Apply when first signs of feeding damage appear or when threshold levels of feeding damage occur.	• Do not apply more than a total of 64 fl oz (1 lb ai) per acre per year. • Do not make more than 3 applications per acre per year. • **Minimum Re-treatment Interval:** 7 days • **PHI:** 7 days. • See Rotational Crop Restrictions.

Pineapple

(For Use only in Hawaii)

Application Rate: Apply as a foliar spray at the rate indicated to control target pests. Heavy infestations may require repeat applications, but follow resistance management guidelines.

Application volume: Apply in spray volume which will provide thorough crop coverage.

Pests and Application Rates:

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
suppression of lepidopterous larvae such as: armyworms banana moth *Batrachedra commosae* *Elaphria nucicolora* fruit borer caterpillar (*Thecla basilides; Strymon basilides*) pineapple caterpillar pink cornworm sugarcane bud moth	4 – 7 fl oz/A (0.06 - 0.10 lbs ai/A	For determining when to treat, scout with enough regularity to monitor the population size of each of the labeled pests. Treat when pests appear, targeting eggs at hatch or small larvae. Consult your extension specialist, certified crop advisor or your state agricultural experiment station for any additional local use recommendations for your area.	• Do not apply more than a total of 28 fl oz (0.44 lb ai) per acre per year • Do not make more than 4 applications per year. • **Minimum Re-treatment Interval:** Do not make applications less than 7 days apart. • **PHI:** 3 days.

Pome Fruits (Crop Group 11-10)[1]

[1]Pome fruit (crop group 11-10) including apple, Asian pear, azarole, crabapple, loquat, mayhaw, medlar, pear, quince, tejocote, cultivars, varieties, and/or hybrids of these.

For best protection, begin applications before egg hatch of each generation. For pests that penetrate fruit apply before the larval hatch and penetrate the fruit. Zylo insecticide may provide 10 to 18 days of protection depending upon application rate and how rapidly fruit and/or leaves are expanding. Most effective crop protection results when an application is made at the initiation of egg hatch. For heavy infestations, continuous moth flight and egg laying, or extended egg hatch, use the maximum specified rates. Maintain coverage on the fruit surface with 10- to 18-day re-treatment intervals.

Zylo insecticide may also be used in a program approach alternated or interspersed with other insecticides. Make sure the re-treatment interval does not exceed the period of effectiveness of the alternate products and Zylo insecticide.

Consult local spray timing advisories or follow biofix dates based upon pheromone trap catches to time sprays appropriately.

Ground Application: Apply by conventional ground sprayers which are calibrated to deliver a minimum of 50 gallons per acre to trellised trees or trees 10 feet tall or less. For trees greater than 10 feet tall, use a minimum of 100 gallons per acre.

Aerial Application: Aerial application is allowed only for the last two applications prior to harvest. Apply in a minimum of 20 gallons per acre. Zylo insecticide can be applied by aerial applications when conditions warrant. However, this method should not be used if the size of the tree or density of the foliage prohibits thorough, uniform coverage of the entire tree canopy.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
codling moth (suppression only) For use against low to moderate infestations in conjunction with alternate control measures such as in established mating disruption blocks.	16 fl oz/A (0.25 lbs ai/A)	For each generation, apply at the initiation of egg lay (usually occurs at 100 to 200 DD, base 50°F, following biofix). Reapply 10 to 18 days later.	• Do not apply more than a total of 64 fl oz (1 lb ai) per acre per year. • Aerial application is allowed **only** for the last two applications prior to harvest. • **PHI:** 14 days.
lesser appleworm oriental fruit moth	12 – 16 fl oz/A (0.19 - 0.25 lbs ai/A)		
obliquebanded leafroller pandemis leafroller	8 – 16 fl oz/A (0.12 - 0.25 lbs ai/A)	**Spring (overwintering) generation:** Make 1 to 2 applications during the pink to petal fall period depending upon infestation level. **Summer generation:** Make the first application during the period of peak egg lay to early egg hatch (usually 200 to 400 DD following biofix). Reapply 10 to 18 days later (usually 500 to 700 DD).	

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
eyespotted bud moth fruittree leafroller light brown apple moth redbanded leafroller variegated leafroller	8 – 16 fl oz/A (0.12 - 0.25 lbs ai/A	For control of surface or foliar feeding leafroller larvae, apply when larvae are feeding.	• Do not apply more than a total of 64 fl oz (1 lb ai) per acre per year. • Aerial application is allowed **only** for the last two applications prior to harvest. • **PHI:** 14 days.
tufted apple bud moth	6 – 10 fl oz/A (0.09 - 0.16 lbs ai/A)	For each generation, apply at 10 to 30% egg hatch.	
spotted tentiform leafminer western tentiform leafminer	8 – 12 fl oz/A (0.12 - 0.19 lbs ai/A)	**First generation:** Apply at pink to petal fall. **Second, third generation:** Apply at early egg hatch for each generation.	
lacanobia fruitworm	12 fl oz/A (0.19 lbs ai/acre)	Apply at egg hatch or at the first sign of larval infestation. Reapply within 10 to 14 days.	

Pomegranate

(Not registered for use in New York)

Ground Application: Apply a minimum of 50 gpa by conventional ground equipment to trellised trees or trees 10 feet tall or less. For trees greater than 10 feet tall, use a minimum of 100 gpa. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 20 gpa. This method should not be used if the size of the tree or density of the foliage prohibits thorough, uniform coverage of the entire tree canopy.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
European grapevine moth filbert worm light brown apple moth navel orangeworm obliquebanded leafroller omnivorous leafroller	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A)	Apply when larvae are feeding. Most effective crop protection results from application made at the initiation of egg hatch. The higher rates in the rate range and additional applications at 10- to 18-day intervals may be required for heavy infestations, sustained moth flight, situations in which it is difficult to achieve thorough coverage, and for quicker knockdown of larvae.	• Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 7 days.
redhumped caterpillar	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A)	Apply at initiation of egg hatch or at the first sign of larval infestation. Reapply in 10 to 14 days to ensure complete coverage of rapidly expanding fruits or foliage.	

Popcorn

(Not registered for use in New York)

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa after initiation of tasseling. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gallons per acre.

Resistance Management: To reduce the potential for resistance development in target pest species, do not make more than two consecutive applications of Zylo insecticide. If additional treatments are required after two consecutive applications of Zylo insecticide, rotate to another class of effective insecticides for at least one application and utilize Integrated Pest Management practices such as routine monitoring, treatment thresholds to time applications, and cultural and biological controls whenever possible. Consult your extension specialist, certified crop advisor, or state agricultural experiment station for information on alternative effective products to use in your area.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
European corn borer southwestern corn borer	4 – 8 fl oa/A (0.06 – 0.12 lbs ai/A)	Apply at first sign of egg hatch or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities. Direct application at the whorl for early season (first generation) infestations. Apply as broadcast or multinozzle over the row application to mid- and late season infestations.	• Do not apply more than 8 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • Do not apply to popcorn by aerial ULV. • **PHI-Grain & Stover:** 21 days. • **PHI-Popcorn Forage:** 0 days. • See Rotational Crop Restrictions below.
true armyworm western bean cutworm	4 – 8 fl oz/A (0.06 – 0.12 lbs ai/A)	Apply at first sign of egg hatch (field corn), feeding damage (sweet corn), or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities. Under heavy infestations, continuous moth flights, or rapid crop growth and development, reapply at 5- to 10-day re-treatment interval.	

Root Vegetables (Subgroups 1A, 1B)[1]

(Not registered for use in New York)

[1]Root vegetables (subgroups 1A, 1B) including black salsify, carrot, celeriac, chicory, edible burdock, garden beet, ginseng, horseradish, parsnip, oriental radish, radish, rutabaga, salsify, skirret, Spanish salsify, sugarbeet, turnip, turnip-rooted chervil, and turnip-rooted parsley.

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworms cabbageworms cutworm (suppression only) loopers saltmarsh caterpillar webworms	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A)	Apply at egg hatch or when first signs of feeding occur. Use a higher rate for heavier infestations and under conditions in which thorough coverage is more difficult. Under heavy infestations, continuous moth flights and/or egg masses and larvae in all stages of development, reapply to protect new growth until moth flights and/or hits subside.	• Do not apply more than a total of 64 fl oz (1 lb ai) per acre per year for all crops except radish. • Do not apply more than a total of 32 fl oz (0.5 lb ai) per acre per year for radish. • **Minimum Re-treatment Interval:** 14 days • **PHI-Sugar Beet:** 7 days. • **PHI-All Other Root Vegetables:** 1 days. • See Rotational Crop Restrictions.

Small Fruit Vine Climbing (Except Fuzzy Kiwifruit and Grape) (Crop Group 13- 07F)[1]
(Not registered for use in New York)

[1]Small fruit vine climbing (except fuzzy kiwifruit and grape) (crop group 13-07F) including amur river grape, gooseberry, hardy kiwifruit, maypop, schisandra berry, cultivars, varieties, and/or hybrids of these.

Ground Application: Apply in a minimum of 40 gallons per acre by conventional airblast or over the row sprayer. If using other type of sprayer, apply in sufficient carrier volume to ensure thorough, uniform cover of the crop. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 20 gallons per acre. This method should not be used if the density of the foliage prohibits thorough, uniform coverage of the entire vine canopy.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
grape berry moth	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A)	For internal feeding lepidoptera larvae, apply at initiation of egg hatch for each generation. Reapply within 10 to 18 days to ensure complete coverage of rapidly expanding fruits or foliage.	• Do not apply more than 16 fl oz per acre per application or a total of 48 fl oz (0.75 lb ai) per acre per year. • **PHI:** 30 days
grape leaf folder light brown apple moth omnivorous leafroller obliquebanded leafroller orange tortrix redbanded leafroller		**Spring generation:** Apply at first sign of larval infestation or to small larvae when threshold levels occur. **Summer generation:** For each generation, apply at first egg hatch. Reapply at 10- to 14-day intervals under high pressure or sustained moth flight.	

Sorghum (Grain and Sweet)
(Not registered for use in New York)

Ground Application: Apply in a minimum of 15 gallons per acre by conventional ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gallons per acre.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
southwestern corn borer sugarcane borer	8 – 10 fl oz/A (0.12 – 0.16 lbs ai/A)	Apply at first sign of egg hatch or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities. Apply as broadcast or multinozzle over the row application to mid- and lateseason infestations.	• Do not apply more than 12 fl oz per acre per application or 48 fl oz (0.75 lb ai) per acre per year. • **PHI-Grain & Stover:** 21 days. • **PHI-Forage & Sweet Sorghum Stalk:** 3 days. • See Rotational Crop Restrictions.

Soybean
(Not registered for use in New York)

Ground Application: Apply in a minimum spray volume of 10 gpa using calibrated ground application equipment that provides thorough coverage.

Aerial Application: Apply in a minimum spray volume of 5 gpa in equipment that has been properly patterned and calibrated for environmental conditions at the site. Use higher water volumes for heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworms green clover worm saltmarsh caterpillar soybean loopers velvet bean caterpillar	4 – 8 fl oz/A (0.06 – 0.12 lbs ai/A)	Begin applications when first signs of feeding damage appear or when threshold levels of feeding damage occur. Use a higher rate for heavier infestations and under conditions in which thorough coverage is more difficult.	• Do not apply more than a total of 64 fl oz (1 lb ai) per acre per year. • Do not make more than 4 applications per year. • **Re-Planting Interval:** A 7-day re-planting interval is required for residues of methoxyfenozide. • **PHI-Hay and Forage:** 7 days • **PHI-Seed Harvest:** 14 days

Spearmint and Peppermint
(Not registered for use in New York)

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 5 gpa. Calibrate aircraft to assure uniform coverage of the target crop.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworms cutworms loopers	10 – 16 fl oz/A (0.16 – 0.25 lbs ai/A)	Scout crops on a regular basis and treat as soon as economic thresholds have been met. Target small larvae and egg masses when possible. Use a higher rate in the rate range for high infestations and when extended residual is needed. Reapply at 14- to 21-day intervals when there are continuing infestations.	• • Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • PHI: 14 days.

Stone Fruits (Crop Group 12-12)[1]
(Not registered for use in New York)

[1]Stone fruits (crop group 12-12) including American plum, apricot, beach plum, black cherry, Canada plum, capulin, cherry plum, cherry (sweet, sour), cherry (tart) chickasaw plum, Chinese Jujube, Damson plum, Japanese apricot, Japanese plum, Klamath plum, Nanking cherry, nectarine, peach, plum, plumcot, prune plum, sloe, cultivars, varieties, and/or hybrids of these.

Ground Application: Apply in a minimum of 50 gpa by conventional ground equipment to trellised trees or trees 10 feet tall or less. For trees greater than 10 feet tall, use a minimum of 100 gpa. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 20 gpa. This method should not be used if the size of the tree or density of the foliage prohibits thorough, uniform coverage of the entire tree canopy.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
codling moth (suppression only) oriental fruit moth	10 – 16 fl oz/A (0.16 – 0.25 lbs ai/A)	For control of light to moderate infestations, begin applications before egg hatch of each generation and before the larvae penetrate the fruit. The product provides 10 to 18 days of protection depending upon application rate and how rapidly fruit is expanding. Consult local spray timing advisories or follow biofix dates based upon pheromone trap catches to time sprays appropriately. For continuous moth flight and egg laying, use the highest labeled rate. Maintain coverage on the fruit surface with 10- to 18- day re-treatment intervals. Alternate or intersperse with other insecticides targeted at the same pest so long as the re-treatment interval does not exceed the period of effectiveness of the products being alternated and Zylo insecticide is applied before larvae penetrate the fruit	• Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 7 days.
peach twig borer	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A)	For each generation, apply at initiation of egg hatch before larvae enter the fruit. Reapply in 10 to 14 days to ensure complete coverage of rapidly expanding fruits or foliage, or under conditions of high infestation or sustained moth flight.	

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
obliquebanded leafroller pandemis leafroller	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A)	**Spring (overwintering) generation:** Make 1 to 2 applications during the pink to petal fall period depending upon infestation level. **Summer generation:** Make the first application during the period of peak egg lay to early egg hatch (usually 200 to 400 DD following biofix). Reapply 10 to 18 days later (usually 500 to 700 DD). A higher rate in the rate range and additional applications at 10- to 18-day intervals may be required for heavy infestations, sustained moth flight, situations in which it is difficult to achieve thorough coverage, and for quicker knockdown of larvae.	• Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 7 days.
European grapevine moth fruittree leafroller light brown apple moth omnivorous leafroller redbanded leafroller threelined leafroller tufted apple budmoth variegated leafroller		For control of surface or foliar feeding leafroller larvae, apply when larvae are feeding. Most effective crop protection results from application made at the initiation of egg hatch. For heavy infestations, continuous moth flights, or extended egg hatch, use maximum specified rates. Maintain coverage with 10- to 18-day re-treatment intervals.	
cherry fruitworm green fruitworm lesser appleworm	10 – 16 fl oz/A (0.16 – 0.25 lbs ai/A)	Apply at initiation of egg hatch or at the first sign of larval infestation. Reapply in 10 to 14 days to ensure complete coverage of rapidly expanding fruits or foliage.	
redhumped caterpillar	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A)		

Strawberry
(Not registered for use in New York)

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment to young crop or small plants. Apply in a minimum of 20 gpa to densely foliated or difficult to cover crops to ensure thorough coverage. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworms corn earworm (suppression only) cutworms (suppression only)	6 – 12 fl oz/A (0.09 – 0.19 lbs ai/A)	For early season applications to young crops and small plants. Apply at first sign of feeding damage or when infestations reach threshold levels as defined by a cooperative extension service or other qualified professional authorities. For heavy infestations, continuous moth flights, and/or egg masses and larvae in all stages of development, a 10- to 14-day re-treatment interval is required to protect new growth until moth flights and/or hits subside.	• Do not apply more than 12 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • See Rotational Crop Restrictions. • **PHI:** 3 days.

Tree Nuts (Crop Group 14-12)[1] and Pistachios
(Not registered for use in New York)

[1]Tree nuts (crop group 14-12) including African nut-tree, almond, beech nut, Brazil nut, Brazilian pine, bunya, bur oak, butternut, Cajou nut, candlenut, cashew, chestnut, chinquapin, coconut, coquito nut, dika nut, filbert (hazelnut), ginkgo, Guiana chestnut, heartnut, hickory nut, Japanese horse chestnut, macadamia (bush) nut, mongongo nut, monkey-pot, monkey puzzle nut, Okari nut, Pachira nut, peach palm nut, pecan, pequi, Pili nut, pine nut, pistachio, Sapucaia nut, tropical almond, walnut (black and English), yellowhorn and cultivars, and varieties and/or hybrids of these.

Ground Application: Apply in a minimum of 50 gpa by conventional ground equipment to trees 10 feet tall or less. For trees greater than 10 feet tall, use a minimum of 100 gpa. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa. This method may result in reduced efficacy if the size of the tree or density of the foliage prohibits thorough, uniform coverage of the entire tree canopy.

Almonds

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
peach twig borer	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A)	**Spring (overwintering) generation:** Make 1 to 2 applications during the bloom to petal fall period depending upon infestation level. **Summer generation:** Begin applications at peak moth flight (400 to 450 DD, base 50°F, following biofix). Reapply at 10- to 18-day intervals under high pressure or sustained moth flight. A higher rate in the rate range may be required for extended residual effectiveness, high pest infestation levels, larger trees, or heavy dense foliage.	• Do not apply more than 24 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 14 days.
navel orangeworm	12 – 24 fl oz/A (0.19 – 0.38 lbs ai/A)	Make first application at the initiation of hull split (2 to 5% hull split). Reapply 10 to 14 days later. Under heavy infestation, reapply a third time 10 to 14 days later.	

Hazelnuts

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
filbertworm	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A)	Apply at initiation of egg hatch. Reapply at 14- to 21-day intervals under high pressure or sustained moth flight.	• Do not apply more than 16 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 14 days
obliquebanded leafroller		**Spring (overwintering) generation:** Make 1 to 2 applications depending upon infestation level. **Summer generation:** Make the first application during the period of peak egg lay to early egg hatch (200 to 400 DD following biofix). Reapply 10 to 18 days later (usually 500 to 700 DD).	
European grapevine moth filbert leafroller light brown apple moth omnivorous leaftier		For control of surface of foliar feeding leafroller larvae, apply when larvae are feeding. Most effective crop protection results from application made at the initiation of egg hatch.	

Walnuts

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
codling moth (suppression only)	12 – 24 fl oz/A (0.19 – 0.38 lbs ai/A)	For each generation, apply at initiation of egg hatch (100 to 200 DD following biofox). Control of first generation may require second application (10- to 18-day re-treatment interval) to ensure complete coverage of rapidly expanding nuts and foliage. After nut growth and foliage expansion slows, a 14- to 21-day re-treatment interval may be required to provide control of extended moth flight. A higher rate in the rate range may be required for extended residual effectiveness, high pest infestation levels, larger trees, or heavy dense foliage.	• Do not apply more than 24 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 14 days
navel orangeworm	8 – 16 fl oz/A (0.12 – 0.25 lbs ai/A)	Apply at initiation of egg hatch.	
fall webworm redhumped caterpillar		Apply at first sign of larval infestation.	

Pecans

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
pecan nut casebearer	4 – 8 fl oz/A (0.06 – 0.12 lbs ai/A)	For each generation, apply at initiation of egg hatch (first generation is approximately 8 to 15 days following biofix). Control of first generation may require second application to ensure complete coverage of rapidly expanding nuts and foliage, or under conditions or extended egg lay. A higher rate in the rate range may be required for extended residual effectiveness, higher pest infestations, low crop load, larger trees, or heavy dense foliage.	• Do not apply more than 8 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year. • **PHI:** 14 days.
hickory shuckworm	4 – 8 fl oz/A (0.06 – 0.12 lbs ai/A)	For early- to mid-season infestations reaching threshold levels as defined by state extension specialists or other qualified authorities, make applications at the initiation of egg hatch. For late-season infestations, initiate applications at halfshell hardening. Reapply at 14-day intervals to shuck split or while nuts are susceptible to heavy infestations.	
fall webworm walnut caterpillar		Apply at the first sign of larval infestation.	

Tree Nut Crops not Specifically Listed Above

Restrictions for control of lepidoptera larvae for which Zylo insecticide is registered:

- Do not apply more than 24 fl oz per acre per application or more than a total of 64 fl oz (1 lb ai) per acre per year.
- **PHI:** 14 days.

Performance of Zylo insecticide against pests not listed on this label cannot be warranted nor can crop tolerance in all types and varieties of tree nuts be assured. If unsure, the user is advised to treat a few trees to observe for symptoms before treating large blocks of trees. Generally, optimum performance against lepidoptera pests (worms) is achieved when Zylo insecticide is applied at the initiation of egg hatch. Reapplication intervals of 10 to 20 days may be required if the plant part(s) to be protected from insect damage is rapidly growing or expanding or if pest infestations are heavy or extended.

Tropical Tree Fruits[1]

(Not registered for use in New York)

[1]Tropical tree fruits including acerola, atemoya, avocado, biriba, black sapote, canistal, cherimoya, custard apple, feijoa, guava, ilama, jaboticaba, longan, lychee, mamey sapote, mango, papaya, passionfruit, pulasan, rambutan, sapodilla, soursop, Spanish lime, star apple, starfruit, sugar apple, wax jambu.

Ground Application: Apply in a minimum of 50 gpa by conventional ground equipment to trees 10 feet tall or less. For trees greater than 10 feet tall, apply in a minimum of 100 gpa by conventional group equipment. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
lepidopteran larvae including European grapevine moth guava moth (*Argyresthia*) leafrollers light brown apple moth loopers orange tortrix spanworms webbing worms western tussock moth	10 – 16 fl oz/A (0.16 – 0.25 lbs ai/A)	Apply at egg hatch or when first signs of feeding occur. Use a higher rate for heavier infestations and under conditions in which thorough coverage is more difficult. Under heavy infestations, continuous moth flights and/or egg masses and larvae in all stages of development, reapply at a 6- to 10-day re-treatment interval to protect new growth until moth flights and/or hits subside.	• Do not apply more than a total of 64 fl oz (1 lb ai) per acre per year. • Do not make more than 5 applications per year. • **Acerola, Feijoa, Guava, Jaboticaba, Passionfruit, Starfruit, Wax JambuPHI: : 3 days. Minimum Re-treatment Interval:** 6 days • **Atemoya, Avocado, Biriba, Cherimoya, Custard Apple, Ilama, Soursop, Sugar Apple PHI:** 2 days. **Minimum Re-treatment Interval:** 6 days • **Black Sapote, Canistal, Mamey Sapote, Mango, Papaya, Sapodilla, Star Apple PHI:** 3 days. **Minimum Re-treatment Interval:** 10 days • **Longan, Lychee, Pulasan, Rambutan, Spanish Lime PHI:** 14 days. **Minimum Re-treatment Interval:** 10 days

Tuberous and Corm Vegetables (Except Potato) (Subgroup 1D)[1]

(Not registered for use in New York)

[1]Tuberous and corm vegetables (except potato) (subgroup 1D) including arracacha, arrowroot, bitter cassava, chayote (root), Chinese artichoke, chufa, dasheen, edible canna, ginger, Jerusalem artichoke, leren, sweet cassava, sweet potato, tanier, true yam, turmeric, yam bean.

Ground Application: Apply in a minimum of 10 gpa by conventional ground equipment. Use a spray volume that assures uniform coverage of the infested portions of the treated crop. Calibrate equipment to the desired spray volume.

Aerial Application: Apply in a minimum of 10 gpa. Use a higher carrier volume for heavy infestations and in situations where thorough coverage is difficult to achieve.

Pests	Application Rate (fl oz/acre)	Application Timing	Restrictions
armyworms cabbageworms cutworm (suppression only) loopers saltmarsh caterpillar webworms	6 – 10 fl oz/A (0.09 – 0.16 lbs ai/A)	Apply at egg hatch or when first signs of feeding occur. Use a higher rate for heavier infestations and under conditions in which thorough coverage is more difficult. Under heavy infestations, continuous moth flights and/or egg masses and larvae in all stages of development, reapply to protect new growth until moth flights and/or hits subside.	• Do not apply more than a total of 64 fl oz (1 lb ai) per acre per year. • Do not make more than 3 applications per acre per year. • **Minimum Re-treatment Interval:** 14 days • **PHI:** 7 days. • See Rotational Crop Restrictions.

IMPORTANT INFORMATION

READ BEFORE USING PRODUCT

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. and Seller harmless for any claims relating to such factors.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, UNITED PHOSPHORUS, INC. AND SELLER MAKE NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ON THIS LABEL.

To the extent consistent with applicable law, United Phosphorus, Inc. or Seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product and **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF UNITED PHOSPHORUS, INC. AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF UNITED PHOSPHORUS, INC. OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

United Phosphorus, Inc. and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by the duly authorized representative of United Phosphorus, Inc.

Rev. 10/03/2016

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

October 14, 2016

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

UNITED PHOSPHORUS, INC
630 FREEDOM BUSINESS CENTER, SUITE 402
KING OF PRUSSIA, PA 19406

Report of Analysis for Compliance with PR Notice 11-03

Thank you for your submittal of 03-OCT-16. Our staff has completed a preliminary analysis of the material. The results are provided as follows:

Your submittal was found to be in full compliance with the standards for submission of data contained in PR Notice 11-03. A copy of your bibliography is enclosed, annotated with Master Record ID's (MRIDs) assigned to each document submitted. Please use these numbers in all future references to these documents. Thank you for your cooperation. If you have any questions concerning this data submission, please raise them with the cognizant Product Manager, to whom the data have been released.

PRIA 3 – 21 Day Content Screen Review Worksheet

(EPA/OPP Use Only)

September 2012

21 Day Screen Start Date: 10-3-16

Experts In-Processing Signature: B.B Date 10-7-16 Fee Paid: Yes ✓

Division management contacted on issues No ____ Yes ____ Date ____

EPA Reg. Number: 70506-GGE	EPA Receipt Date: 10-3-16

	Items for Review			Yes	No	N/A*
1	**Application Form** (EPA Form 8570-1) signed & complete including package type			X		
2	**Confidential Statement of Formula** all boxes completed, form signed, and dated (EPA Form 8570-4)			X		
	a) All inerts, including fragrances, approved for the proposed uses (see Footnote A)	yes: X	no:			
3	**Certification with Respect to Citation of Data** (EPA Form 8570-34) completed and signed (N/A if 100% repack)				X	
	Certificate and data matrix consistent					
	If applicant is relying on data that are compensable, is the offer to pay statement included. (see Footnote B)	yes:	no:			
	If applicable, is there a letter of Authorization for exclusive use only.					
4	**Formulator's Exemption Statement** (EPA Form 8570-27) completed and signed (N/A if source is unregistered or applicant owns the technical)			X		
5	**Data Matrix** (EPA Form 8570-35) both internal and external copies (PR 98-5) completed and signed (N/A if 100% repack)			X		
	a) Selective Method (Fee category experts use)	yes: X	no:			
	b) Cite-All (Fee category experts use)	yes:	no:			
	c) Applicant owns all data (Fee category experts use)	yes:	no:			
6	**5 Copies of Label (Electronic labels on CD are encouraged and guidance is available)**			X		
7	**Is the data package consistent with PR Notice 86-5**			X		
8	**Notice of Filing included with petitions**					X

9	**If applicable for conventional applications, <u>reduced risk rationale</u>**			
10	**<u>Required Data</u> and/or data waivers. See Footnote C.**			
	a) List study (or studies) not included with application			

Comments:

Documentation (Pass) or fail
- No Certification with Respect to citation of Data submitted
- Contacted 10/17
- Submitter claims form unnecessary, see Email
- All Required forms Complete

Inerts (Pass) or Fail
- Inerts Approved for Pre-Harvest Food Use

PRN 11-03 (Pass) or Fail
- MRID: 50034

10/19/16

Overall Status: (Pass) or Fail

* N/A – Not Applicable

Footnotes

A. During the 21 day initial content review, all CSFs will be reviewed to determine whether all inerts listed, including fragrances, are approved for the proposed uses or have an application pending with the Agency. If an unapproved inert with no application pending with the Agency is identified, the applicant must either 1) resolve the inert issue by, for example, removing the inert, substituting it with an approved inert, submitting documentation that EPA approved the inert for the proposed pesticidal uses, correcting mistakes on the CSF, etc. or 2) provide the data to support OPP approval of the inert or 3) withdraw the application. Removing or substituting an inert ingredient will require a new CSF and may require submission of data. All information, forms, data and documentation resolving the inert issue must have been received by the Agency or the application withdrawn within the 21 day period, otherwise, the Agency will reject the application as described below.

To successfully complete this aspect of the 21 day initial content screen, applicants are **strongly encouraged** to verify that all inert ingredients have been approved for the application's uses or have an application pending with the Agency **even if a product is currently registered** by consulting the inert Web site and if the inert is not approved nor has an application pending with the Agency, to **obtain the necessary inert approval prior to submitting an application to register a pesticide product containing that inert ingredient.** Some inert ingredients are no longer approved for food uses or certain types of uses. The name and/or CAS number on a CSF must match the name and CAS number on this web site. Simple typographical errors in the name or CAS number have resulted in processing delays.

If an inert is not listed on the inert ingredient web site and the applicant believes that the inert has been approved, the applicant should contact the Inert Ingredient Assessment Branch (IIAB) at inertsbranch@epa.gov and resolve the issue. Copies of the correspondence with IIAB resolving the issue should accompany the application. All new inerts except PIP inerts are reviewed by IIAB. The IIAB should also be contacted for any questions on what supporting data needs to be submitted for and the Agency's inert review process. Questions on PIP inerts should be directed to the Chief of Microbial Pesticides Branch.

When a brand, trade, or proprietary name of an inert ingredient is listed on a CSF, additional information such as an alternate name of the inert, CAS number or other information must also be included to enable the Agency to determine if it has been approved. Each component of an inert mixture (including a fragrance) must be identified. In some cases, the supplier of the mixture or fragrance may need to provide this information to the Agency. Prior to the Agency's receipt of an application, applicants must arrange with a proprietary mixture or fragrance supplier to provide the component information to the Agency or promptly upon EPA's request. If the inert ingredients in a proprietary blend (including fragrances) cannot or are not identified or provided within the 21-day content review period, the Agency will reject the application.

During the 21 day content review, applicants should submit information to the individual identified by the Agency when the applicant is informed of an unapproved inert.

Unapproved Inerts Identified on CSFs

All applications except conventional new products and PIPs

Once an unapproved inert is identified on a CSF, the Agency will contact the applicant with the following options:

1. Correct the application by, for instance, correcting the inert's identity or CAS number, providing documentation that the inert has been approved, or removing the unapproved inert from the CSF or replacing it with one that is approved for the application's uses; or

2. Provide the required information necessary to identify an inert approval application that is pending with the Agency; or

3. Submit the information and data needed for the Agency to approve the unapproved inert. If this option is selected and implemented, the Agency may request an extension in the PRIA decision review timeframe to accommodate the inert review/approval process;

4. Withdraw the application (the Agency retains 25% of the full fee for the fee category estimated); or

If none of these options is selected and implemented by the applicant within the 21 day content review period, the Agency will reject the application and retain 25% of the full fee of the category identified.

Conventional New Product Applications

When the Registration Division identifies an unapproved inert on a CSF with an application for a new product that the applicant has not identified as requiring an inert approval (R300 or R301), it will contact the applicant with the following options:

1. Correct the application by, for instance, correcting the inert's identity or CAS number, providing documentation that the inert has been approved, or removing the unapproved inert from the CSF or replacing it with one that is approved for the application's uses; or

2. Submit the information and data needed for the Agency to approve the unapproved inert, including any required petition to establish or amend a tolerance or exemption from a tolerance. (This option may change the PRIA category for the application, which could require a longer decision review time and a larger fee. If additional fees are due, they must be received by the Agency within the 21 day content review period.)

3. Withdraw the application (the Agency retains 25% of the full fee for the fee category estimated); or

If none of the above options is selected and implemented during the 21-day content-review period, the Agency will reject the application and retain 25% of the appropriate fee for the new product-inert approval category.

PIP Applications

When the Biopesticide and Pollution Prevention Division identifies an unapproved inert on a PIP CSF and a request to approve the inert does not accompany the application, it will contact the applicant with the following options:

1. Correct the application by, for instance, correcting the spelling or name of the inert to that in 40 CFR 174, or providing documentation that the inert has been approved; or

2. Submit the information and data needed for the Agency to approve the unapproved inert. If an inert ingredient tolerance exemption petition is required, the petition must be received by the Agency and the B903 fee paid within the 21 day period. If this option is selected and implemented, the Agency will discuss harmonizing the timeframe for both actions.

3. Withdraw the application (the Agency retains 25% of the full fee for the fee category estimated); or

If none of the above options is selected and implemented during the 21 day content review period, the Agency will reject the application and retain 25% of the fee.

B. A policy on documentation of offers to pay is still being developed, however, for a me-too or fast track (similar/identical) new product, R300 or A530, an application without the necessary authorizations of offers to pay will be placed into either R301 or A531. The Agency recommends that authorizations of offers to pay be submitted with other PRIA applications to avoid delays in the Agency's decision.

C. Biopesticide applicants are advised to contact the Agency and discuss study waivers prior to submitting their application to the Agency. Documentation of such discussions should be submitted with the study waiver.

R 310

End Use (EP) or Manufacturing Use (MP) product or Technical Grade of the Active Ingredient (TGAI). Must submit Group A and B product chemistry data for each proposed product unless it's a 100% identical (repack): YES or NO (circle one)

Guideline No.	Group A: Product Chemistry Data Study Title	EP Data Submitted		MP Data Submitted		TGAI	
		Yes	No	Yes	No	Yes	No
830.1550	Product Identity & Composition	X					
830.1600	Description of materials used to produce the product	X					
830.1650	Description of formulation process	X					
830.1670	Discussion on the formation of impurities	X					
830.1700	Preliminary analysis	X					
830.1750	Certified limits (158.345)	X					
830.1800	Enforcement analytical method	X					

Guideline No.	Group B: Product Chemistry Data Study Title	EP Data Submitted		MP Data Submitted		TGAI	
		Yes	No	Yes	No	Yes	No
830.6302	Color	X					
830.6303	Physical State	X					
830.6304	Odor	X					
830.6313	Stability to normal and elevated temperatures metal and metal ions						
830.6314	Oxidation/Reduction (Chemical incompatibility)	X					
830.6315	Flammability	X					
830.6316	Explodability	X					
830.6317	Storage stability	X					
830.6319	Miscibility	X					
830.6320	Corrosion Characteristics	X					
830.6321	Dielectric Breakdown Voltage	X					
830.7000	pH	X					
830.7050	UV/ Visible Absorption						
830.7100	Viscosity	X					
830.7200	Melting Point						
830.7220	Boiling Point						
830.7300	Density	X					
830.7370	Dissociation Constant						
830.7550	Partition Coefficient						
830.7840	Water Solubility						
830.7950	Vapor Pressure						

Grayed out = data not required

R 310

New products must either: 1) supply the product specific acute toxicity 6 pack data (listed below), or 2) provide a bridging rationale document. The bridging document directs OPP to use a currently registered set of 6 acute toxicity data and label; instead of submitting product specific data.

Guideline No.	Acute toxicity (6 pack) Study Title	Data submitted		Cited	
		Yes	No	Yes	No
870.1100	Acute Oral (LD50)	X			
870.1200	Acute Dermal (LD50)	X			
870.1300	Acute Inhalation (LC50)	X			
870.2400	Acute Eye Irritation	X			
870.2500	Acute Dermal Irritation	X			
870.2600	Dermal Sensitization	X			

Efficacy – which guideline is used depends on the proposed label use

Guideline No.	Study Title	Data submitted		Cited		Comments
		Yes	No	Yes	No	
810.3100	Soil Treatments for Imported Fire Ants					N/A
810.3200	Livestock, Poultry, Fur and Wool-Bearing Animal Treatments					N/A
810.3300	Treatments to Control Pests of Humans and Pets					N/A
810.3400	Mosquito, Black Fly, and Biting Midge (Sand Fly) Treatments					N/A
810.3500	Premises Treatments					N/A
810.3600	Structural Treatments					N/A
810.3800	Methods for Efficacy Testing of Termite Baits					N/A

waiting for Lab
10/20/16

21-Day Screen Completed by Contractor

21-Day Expires on 10-24-16

Jacket # 70506-GGE
MRID# 500341

Content Screen: Recommend to Pass/Fail

11-3 Review: Pass/Fail/NA

Overall Status: Recommend to Pass/Fail

Transfer This Jacket to:

STEPHEN SCHAIBLE

10

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

October 6, 2016

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

OPP Decision Number: D-522412
EPA File Symbol or Registration Number: 70506-GGE
Product Name: Zylo Insecticide
EPA Receipt Date: 03-Oct-2016
EPA Company Number: 70506
Company Name: UNITED PHOSPHORUS, INC

SHERRY B. HUTCHESON
UNITED PHOSPHORUS, INC
630 FREEDOM BUSINESS CENTER, SUITE 402
KING OF PRUSSIA, PA 19406-

SUBJECT: Receipt of Registration Application Subject to Registration Service Fee

Dear Registrant:

The Office of Pesticide Programs has received your application and certification of payment. If you submitted data with this application, the results of the PRN-2011-3 screen will be communicated separately. During the administrative screen, the Office of Pesticide Programs has determined that this Action is subject to a Pesticide Registration Service Fee as defined in the Pesticide Registration Improvement Act.

The Action has been identified as Action Code R310:

NEW END-USE OR MANUFACTURING USE PRODUCT WITH REGISTERED SOURCE(S) OF ACTIVE INGREDIENT(S);INCLUDES PRODUCTS CONTAINING TWO OR MORE REGISTERED ACTIVE INGREDIENTS PREVIOUSLY COMBINED IN OTHER REGISTERED PRODUCTS;REQUIRES REVIEW OF DATA PACKAGE WITHIN RD ONLY;INCLUDES DATA AND/OR WAIVERS OF DATA FOR ONLY:;PRODUCT CHEMISTRY;ACUTE TOXICITY;PUBLIC HEALTH PEST EFFICACY);CHILD RESISTANT PACKAGING;

No additional payment is due at this time. If you have any questions, please contact the Pesticide Registration Service Fee Ombudsman at (703) 308-9362.

Sincerely,

Front End Processing Staff
Information Technology & Resources Management Division

Fee for Service {992908I~

This package includes the following

- (•) New Registration
- ( ) Amendment

[x] Studies? [ ] Fee Waiver?

[ ] volpay % Reduction: ___

for Division

- ( ) AD
- ( ) BPPD
- (•) RD

Risk Mgr. 10

Receipt No. S- 992908

EPA File Symbol/Reg. No. 70506-GGE

Pin-Punch Date: 10/3/2016

[ ] This item is NOT subject to FFS action.

Action Code:

Requested: R310

Granted: R310

Amount Due: $ 5301

Parent/Child Decisions:

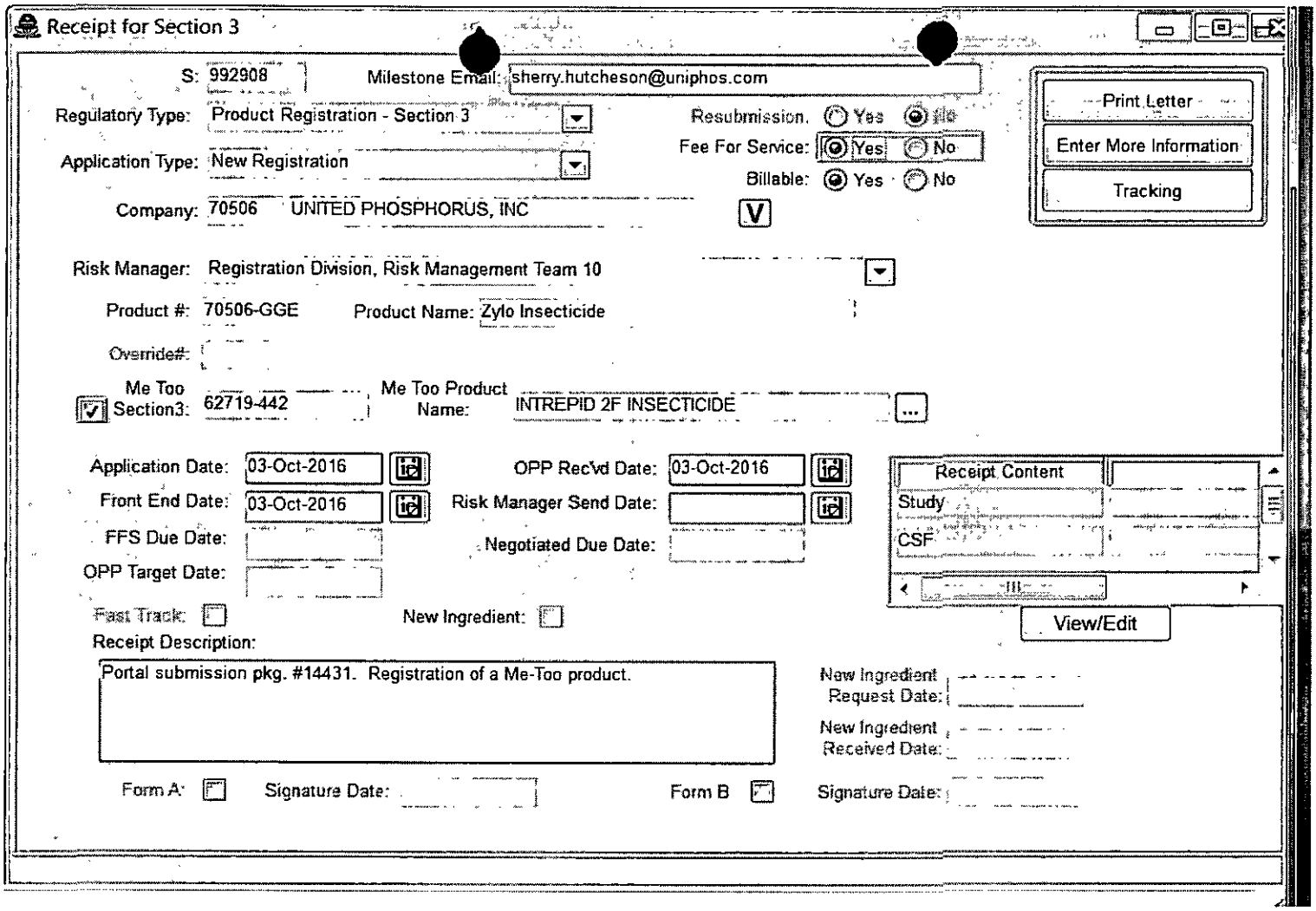
[x] Inert Cleared for Intended Use [x] Uncleared Inert in Product

Reviewer: [signature] Date: 10/4/16

Remarks:

Coded in documentum

DOCUMENTUM


Receipt for Section 3
S: 992908
Milestone Email: sherry.hutcheson@uniphos.com
Regulatory Type: Product Registration - Section 3
Resubmission: Yes No
Application Type: New Registration
Fee For Service: Yes No
Billable: Yes No
Company: 70506 UNITED PHOSPHORUS, INC
Print Letter
Enter More Information
Tracking
Risk Manager: Registration Division, Risk Management Team 10
Product #: 70506-GGE
Product Name: Zylo Insecticide
Override#:
Me Too Section3: 62719-442
Me Too Product Name: INTREPID 2F INSECTICIDE
Application Date: 03-Oct-2016
OPP Rec'vd Date: 03-Oct-2016
Front End Date: 03-Oct-2016
Risk Manager Send Date:
FFS Due Date:
Negotiated Due Date:
OPP Target Date:
Receipt Content
Study
CSF
Fast Track:
New Ingredient:
View/Edit
Receipt Description:
Portal submission pkg. #14431. Registration of a Me-Too product.
New Ingredient Request Date:
New Ingredient Received Date:
Form A:
Signature Date:
Form B
Signature Date:

Pay.gov

Receipt

Your payment is submitted
Pay.gov Tracking ID: 25U7VDJM
Agency Tracking ID: 75103189730
Form Name: Pesticide Registration Improvement Act - Prepayment
Application Name: PRIA Service Fees

Payment Information
Payment Type: Bank account (ACH)
Payment Amount: $5,301.00
Transaction Date: 10/03/2016 08:59:27 AM EDT
Payment Date: 10/04/2016
Registration Number:
Company Name: United Phosphorus, Inc.
Company Number: 70506
Action Code: R310

Account Information
Account Holder Name: United Phosphorus, Inc.
Routing Number: 021200339
Account Number: **********2762

Email Confirmation Receipt
Confirmation Receipts have been emailed to:
sherry.hutcheson@uniphos.com
wes.daughtry@uniphos.com

Pages 191- 197 Product ingredient source information may be entitled to confidential treatment